DOCUMENT RESUME

ED 301 356 PS 017 688

AUTHOR Adams, Velma A., Ed.; Goranson, Donald G., Jr., Ed.
TITLE A Guide to Program Development for Kindergarten: Part I and Part II.
INSTITUTION Connecticut State Dept. of Education, Hartford.
PUB DATE 88
NOTE 301p.; For related document, see ED 293 649.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC13 Plus Postage.
DESCRIPTORS Art Education; Child Development; Class Organization; Educational History; Educational Planning; Educational Quality; Educational Theories; Emotional Development; Family School Relationship; Guidelines; *Kindergarten; Language Arts; Learning; Mathematics Instruction; Physical Education; Primary Education; *Program Development; Program Evaluation; School Community Relationship; Science Instruction; Second Language Instruction; Social Development; Social Studies; State Curriculum Guides; Transitional Programs
IDENTIFIERS *Connecticut

ABSTRACT

In two parts, Connecticut's 1988 kindergarten curriculum guide offers both a philosophical foundation and a practical direction for program development. Part I discusses the historical perspectives of kindergarten; the basis for understanding the effect of growth and development in planning for young children; a focus on the interactionist theoretical model for program development; components of a high quality kindergarten program; elements of social and emotional development; organization of the kindergarten, including the extended-day kindergarten; approaches to building a home-school-community partnership; strategies for developing a continuum of experiences from preschool through the primary grades; and a process for effective planning and evaluation. Part II details program content in the arts (creative dramatics, creative movement, music and visual arts); foreign languages; language arts; mathematics; physical education (including health and safety); social studies; and science. These subjects are discussed separately in order to facilitate the reader's review of the detail and guidance within each area. But an integrated approach remains the key to the work. (RH)

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GUIDE TO PROGRAM DEVELOPMENT FOR KINDERGARTEN

PART I

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A GUIDE TO PROGRAM DEVELOPMENT FOR KINDERGARTEN

PART I

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Principal editor of *A Guide to Program Development for Kindergarten Part I* was Velma A. Adams.

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Foreword

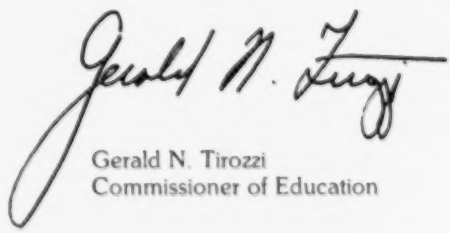
Each year a vast majority of Connecticut's kindergarten-age children enroll in public schools, and many of these youngsters enter kindergarten with significant prior preschool experience. This phenomenon, as well as recent compelling research about how young children learn, has led educators to question the assumptions underlying present kindergarten programs. The result of this scrutiny may be fundamental change in the philosophy, goals, content, instructional techniques and evaluation of kindergarten programs in Connecticut. This *Guide to Program Development for Kindergarten* has been developed to help stimulate this dynamic—and essential—process.

A number of basic learning tenets provide the central focus of this guide. They are: (1) all children are capable of learning; (2) children learn best through methods and in environments that respect their individual development and personal interests; (3) the process of learning is dynamic and its outcomes are integrated into the lives of the young learner; (4) the innate desire to learn can be heightened by caring and sensitive adults in the lives of children; and (5) children who enjoy school are more disposed toward the benefits of that learning environment.

Similarly, there are a number of teaching premises upon which this guide is based. These include: (1) the kindergarten program is adaptable to the needs of a wide range of learners; (2) a good curriculum is best characterized by the active interaction of children with ideas and materials rather than with single-objective and narrowly-defined paper tasks; (3) the dignity of the learner and respect for the child's personal circumstances must always be affirmed; and (4) the school and family must act as a team collaborating in the education of the child.

This guide is intended to bring useful information to those in the process of creating developmentally appropriate kindergarten programs in all settings—urban, rural and suburban. It encourages teachers and curriculum specialists to create programs that model the enthusiasm young children have for learning. I believe it will be an invaluable resource to all those who are responsible for the education of young children.

The importance of providing high-quality early childhood education has never been more clear. As we endeavor to meet this challenge, I am confident that the creativity and commitment of Connecticut teachers, administrators and parents will ensure the best possible kindergartens for all the young children of our state.



Gerald N. Tirozzi
Commissioner of Education

Acknowledgments

An advisory committee was established in 1985 by Commissioner Gerald N. Tirozzi to develop Connecticut's first *Guide to Program Development for Kindergarten*. Its leadership and coordination were ably provided by Helen C. Martin, chairperson, and Carolyn W. Lester, coordinator. Appreciation is offered to the committee members for the time and expertise they so generously gave in providing philosophical direction and content advice throughout the challenging and professionally stimulating process of developing this guide.

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Thanks are extended to the major authors and to others who contributed significantly to the writing of Part I: Karen Burg, Eleanor Cook, Pamela L. Granucci, Carolyn W. Lester, Christine L. Roberts and Mary Ellen Stanwick. Writing contributions were also made by Cheryl Brown, Sandra Brown, George Coleman, Susan Cruikshank, Harold C. Forsberg, Carolyn Coulter Gilbert, Theresa Kelly, Helen C. Martin, Patricia Nebel, Eleanor Osborne, Patricia Reinhardt and Marilyn Schaffer.

Throughout the development of Part I, the committee was guided by the editing of editorial consultants Mary E. Lang and Mary Ellen Stanwick, prior to the final editing by Velma A. Adams in preparation for State Department of Education editing, layout and production by Marsha J. Howland and Elizabeth Speno. Donald G. Goranson also contributed to the final editing and production of Part I. Christine Mercier provided staff support.

Staff preparation of the manuscript was provided through the dedicated efforts of Janet Manyak and Ann Marie Day, with assistance from Marie Day, Dorothy Heffernan, Janet Montague and Ann Murphy.

Introduction

Introduction

Planning a kindergarten curriculum that instills learning through individual discovery should stimulate professional excitement. Connecticut's *Guide to Program Development for Kindergarten*, published in two volumes, focuses on both the theory supporting this challenge and the practical how-tos in the varied program areas.

Local school district personnel and all who share responsibility and a concern for the development of effective kindergarten programs can use this guide to:

- ☐ assist in program development or revision of both half- and extended-day programs;
- ☐ provide direction in professional development activities for teachers and administrators;
- ☐ create the basis for building a continuum of developmentally appropriate practice throughout the primary grades;
- ☐ serve as a reference for working with preschool personnel in helping children to make a smooth transition from preschool programs;
- ☐ determine purposes for establishing extended-day kindergarten programs; and
- ☐ provide articulation for parents, boards of education and others interested in developmentally appropriate programs.

Part I provides the historical perspectives of kindergarten; the basis for understanding the effect of growth and development in planning for young children; a focus on the interactionist theoretical model for program development; components of a high-quality kindergarten program; elements of social and emotional development; organization of the kindergarten, including the extended-day; approaches to building a home/school/community partnership; strategies for developing a continuum of experiences from preschool through the primary grades; and a process for effective planning and evaluation.

Part II details program content in the arts, foreign language, language arts, mathematics, physical education (including health and safety), social studies and science. With an emphasis on process and the facilitation of learning which is adapted to young children's learning styles, a content-integrated program should reflect intellectual excitement, physical involvement, social interaction and emotional contentment. Opportunities for problem solving and creativity are needed to augment cognitive and physical growth and to develop self-esteem and autonomy. Social and emotional development need to be enhanced by encouraging social interaction and a sense of responsibility toward self and others.

The guide emphasizes sound interactionist learning theory of early childhood education, as well as a realistic and practical approach to kindergarten planning. Children explore materials and engage in concrete activities which lead them to ask questions, form ideas and obtain feedback. The emphasis is on the active doing of children. Teaching begins by providing a setting and materials that are drawn from or suggest interesting ideas to children. The teacher is key in providing opportunities for learning experiences and in offering comments, questions and problem-solving situations.

Learning centers within the kindergarten classroom support the interactionist model. Imagine walking into a kindergarten classroom and seeing such centers planned around an event or theme such as a children's story,

birthday or field trip; activities such as art, cooking or woodworking; and skill or concept development such as sorting, matching or patterning. In this kind of setting you will see children actively involved in learning, because such centers have been planned around the children's interests and needs. The teacher is key to the management of learning centers, which are essential to the learning and development of cognitive skills as well as to the social, emotional and physical development of children.

There are times when all kindergarten children are engaged in an experience planned around a theme, activity or concept developed in an integrated manner. For example, a book read aloud by the teacher may lend itself to dramatic play or to an art activity. Likewise, a cooking experience can be integrated with science and mathematics. Many examples of integrating the curriculum appear within the guide.

Language permeates all experiences in the kindergarten classroom. The environment is alive with activity and language. Experience charts of children's thoughts and observations and dictated stories with accompanying illustrations are parts of the language experience approach which emphasizes the meaning of spoken and written words and forms an appropriate foundation for reading and writing instruction in the primary grades.

In order to provide a nonhurried pace to the learning activities and experiences in a kindergarten classroom, a session of more than two and a half hours is strongly recommended. Additionally, the efforts of kindergarten teachers to strengthen communications with preschool and primary grade teachers and with parents are essential to ensure a continuous flow of learning during these important early childhood years.

This *Guide to Program Development for Kindergarten* provides both a philosophical foundation and practical direction for developing a modern kindergarten program. The text cites works by leading early childhood educators, and lists of references are provided for further study. Thus, the guide offers information and, it is hoped, inspiration to professional educators in the process of planning, implementing, evaluating and sustaining the best possible learning environments for young children.

PUBLIC EXERCISES

IN

MODEL SCHOOLS AND KINDERGARTEN.

State Normal School, New Britain,

FRIDAY, JUNE 24, 1887.

9.00 to 11.45, A. M.

9.00.	Opening Exercises.		
9.30.	Games.		
10.00.	Work at Tables.		
	1st Table.	5th Gift,	*Miss Smith.*
	2nd "	Sticklaying,	*Miss Conklin.*
	3rd "	Weaving,	*Miss Learned.*
	4th "	Clay Modeling,	*Miss Stillson.*
	5th "	4th Gift,	*Miss Evenden.*
	6th "	3rd Gift,	*Miss Curtis.*
	7th "	1st Gift,	*Mrs. Somers.*
10.30	Gymnastics and Marching.		
11.00	Work at Tables.		
	1st Table.	11th Gift,	*Miss Smith.*
	2nd "	3rd and 4th Gifts,	*Miss Conklin.*
	3rd "	Point,	*Miss Learned.*
	4th "	Sewing,	*Miss Stillson.*
	5th "	Paper Folding,	*Miss Evenden.*
	6th "	Mounting,	*Miss Curtis.*
	7th "	Color Lesson,	*Mrs. Somers.*
11.30.	Good bye.		

Visitors are requested not to talk to pupils or teachers.

ROOM 9.

Miss Luddington, Teacher.

9.00.	Opening Exercises.	
9.10.	Phonics,	*Miss Francis.*
9.25.	Reading,	*Miss Luddington.*
9.35.	Number,	*Miss Roemer.*
9.45.	Gymnastics,	*Miss Adams.*
9.55.	Language,	*Miss Mott.*
10.05.	Guessing Games,	*Miss Luddington.*
10.15.	Recess.	
10.30.	Word Lesson,	*Miss Gladwin.*
	Word Lesson,	*Miss Hinchliffe.*
10.40.	Number,	*Miss Evenden.*
10.50.	Reading,	*Miss Luddington*
11.05.	General Exercises.	
11.15.	Language,	*Miss Brown.*
11.25.	Number,	*Miss Luddington.*

CAMP BUILDING.

Miss Kemp, Teacher.

9.00.	Opening Exercises,	*Miss Kemp.*
9.15.	Number,	*Miss Smith.*
9.35.	Geography,	*Miss Kemp.*
10.00.	Number,	*Mr. Watson.*
10.20.	Gymnastics,	*Miss Curtis.*
10.35.	Number,	*Miss Kemp.*
10.55.	General Exercise,	*Miss Kemp.*
11.05.	Reading,	*Miss Hanna.*
11.25.	Number,	*Miss Bell.*

Historical Perspectives 1

Today we view childhood as a special time of life. Inherent in this notion are the ideas that the young child:

- ☐ is an important and valuable member of our society;
- ☐ has a unique way of viewing the world; and
- ☐ deserves to be educated within programs which address his/her developmental characteristics, needs and interests.

As we attempt to define, plan and implement appropriate kindergarten programs, it is necessary to know how we arrived at our current understanding of the kindergarten child.

The influence of Froebel

The kindergarten was given its truly distinctive character by Friedrich Froebel (1782-1852). The roots of Froebel's kindergarten lie in Aristotle's notions of child development and in the ideas of two other Swiss thinkers, Jean-Jacques Rousseau (1712-1778) and Johann Heinrich Pestalozzi (1746-1827). Rousseau emphasized the importance of understanding child development in the context of appropriate child activity and focused on the individual as a lifelong learner. The object of education was not to fill the mind with information, but to teach methods of acquiring it when needed. Pestalozzi believed that the child's natural instincts proved the best motivation for learning. The teacher was to guide each child in a natural sequence of development, relying on experiences of the senses and progressing from the concrete to the abstract.

Many thinkers had used the image of a flower blooming or unfolding to describe the development of the child. Froebel, however, considered this natural, sequential process of child development more than a metaphor. The growth of a child through successive stages was, for Froebel, as real as the growth of plants. Thus, he christened his early childhood programs "kindergartens," or gardens of children.

Of the many ideas Froebel conceived, the role of play as a means of enhancing self-development was perhaps the most innovative and the most lasting. Previously, although a few educators had acknowledged that play might be legitimately used as a reward or inducement, most believed it had no place in the learning process or in the schools. Such was the opinion of America's first champions of universal education, the Puritans. Froebel was the first educator to view play as a valuable end in itself because it promoted development in children. He also refined Pestalozzi's concrete object lessons. For him, the objects provided children with more than sense impressions; they could also inspire symbolic understanding. A ball, for example, was an important object in the Froebelian kindergarten, not simply as a toy or as a vehicle by which children were taught to recognize a sphere, but also as the physical manifestation of "the concept of the divine, all-inclusive unit" (Brubacher, 1966). Similarly, he arranged children in a circle to infuse the idea of unity as a key to social relationships. His "gifts" (objects) could be considered the first educational toys, but were to be used in a step-by-step, highly prescribed fashion. The "occupations" (activities) included drawing, mat weaving, paper folding, and modeling with clay.

Did you know that . . .

Today's singing games are similar to Froebel's 'Mother Songs' using action or finger plays to reinforce skills and concepts.

Did you know that . . .

'Circle time' originated from the Froebelian kindergarten.

Did you know that . . .

Parquetry blocks are based on a Froebelian 'gift.'

The spiritual meaning of many Froebelian gifts and occupations may have faded, but their pedagogical value has not. Beginning in the late 1830s, Froebel established schools in Switzerland and Germany, but it was in the United States that his innovative approaches to early childhood education found the most fertile soil.

History of Kindergarten in Connecticut

Prior to 1968, a number of public and independent schools in Connecticut provided kindergarten programs. Many of these programs were parent cooperative kindergartens. In its 1967 session, the state legislature mandated that the public schools provide kindergartens in every town (except for a few one-year postponements) for a 180-day school year beginning July 1, 1968. All children five years of age, or who will be five years old by January 1 of the school year, are eligible to attend school beginning in September. That law still governs the provision of kindergarten in Connecticut.

Did you know that . . .

Milton Bradley Co. began producing Froebel's 'gifts' commercially in 1871.

Kindergarten in the U.S. before 1900

The first kindergarten in the United States was established in 1856 in Watertown, Wisconsin, by Margarethe Schurz (1834-1879), a student of Froebel. Instruction was in German. The first English-speaking kindergarten, a private school, was established in 1860 in Boston, Massachusetts, by Elizabeth Peabody. Peabody's model came from England, where the kindergarten had already been somewhat modified from Froebel's model. Although other private kindergartens were founded, none enjoyed much longevity. The kindergarten would not become entrenched until it was incorporated into public education.

The first public kindergarten was established in 1873 in St. Louis, Missouri, by Susan Blow (1843-1916) with the full support of William T. Harris (1835-1909), who later became United States commissioner of education. There were many arguments against the "kindergarten movement," including the high cost of materials and the required low student-teacher ratios. Also problematic to the formation of kindergartens was the legal definition of elementary school. Nonetheless, by 1880 there were at least 400 kindergartens in more than 30 states. Despite increasing popularity, however, kindergarten continued to generate controversy. On the one hand, many traditional educators thought the emphasis on play in kindergarten was inappropriate; on the other hand, kindergarten teachers criticized the academic emphasis in primary schools, arguing that Froebelian concepts applied to the education of children beyond kindergarten.

European influences in the early 20th century

After the turn of the century, a variety of influences came to bear upon the American kindergarten. A significant adaptation in early childhood education occurred as a result of the methods and theories of Maria

Montessori (1870-1952), the first female physician in Italy and a noted educator. While working with poor and mentally retarded children, Montessori designed a teaching method incorporating the use of a series of materials, carefully sequenced in small learning steps, to develop the five senses. Many of these materials were self-correcting, allowing children to work independently. She believed order and a "prepared environment" were essential for children. In her school, activities related to practical life, emphasizing the care of one's self and environment, were also stressed. To make these practical lessons easier to accomplish, she created the first classroom furniture built to a child's scale. A key concept Montessori advanced was the need to observe individual children to determine their readiness to undertake new tasks. Although Montessori's practices were influential on early childhood education throughout the world, early childhood programs featuring her techniques were not prevalent in the United States until the 1950s.

Did you know that . . .

Montessori created the first classroom furniture built to a child's scale.

The revolutionary theories of psychoanalysis, formulated by Sigmund Freud (1856-1939), were another influence. During the early 20th century, educators became increasingly aware of the affective domain and the need to recognize its influence on learning. Susan Isaacs, a British educator, made a notable application of psychoanlytic concepts. In 1924, she established the Malting House School, where she put into practice her belief that cognition was largely developed through children's interests, feelings and social interactions. Isaacs' ideas and her school were the precursors of the "open education" methods in the 1970s.

American influences on early 20th-century kindergartens

Perhaps the strongest forces for change, however, came not from abroad, but from three notable American thinkers, John Dewey (1859-1952), G. Stanley Hall (1844-1924), and Edward Lee Thorndike (1874-1949).

As a philosopher, Dewey believed that the goal of education was to prepare individuals for life in a democracy. He objected to Froebel's highly rigid method. In a sub-primary laboratory school at the University of Chicago, Dewey put into practice his "learning by doing" theories. Children engaged in real-life activities that were based on their needs and interests and that were encouraged to promote both problem solving and appropriate socialization. For example, in Dewey's classroom, children planned, prepared and served their own lunch. Children also participated in planning, organizing and evaluating their own learning experiences, while teachers acted as facilitators and guides. The environment was informal, changed to meet children's immediate needs, and included many "found" materials. Progressive education, as Dewey's principles were labeled, became exceedingly controversial, though it did have a lasting impact on kindergarten.

Hall was among the first of the scientifically-oriented psychologists, as opposed to earlier philosophically-oriented ones. He greatly advanced the child study movement. One of Hall's significant formulations was the notion of catharsis, or letting children express emotions and behaviors, including negative ones such as fighting, as a natural part of development.

From early experimental studies in animal learning, Thorndike developed the theory that the primary means of learning is trial and error. To facilitate learning, he postulated that the educator's aim must be to reduce errors by connecting a stimulus with the correct response. The new scientific approach to the study of child development pioneered by Hall, Thorndike and all who followed in their wake, made a significant contribution to the professionalism of early childhood education. Many of their theories and later refinements, however, have also inspired considerable debate.

The kindergarten debate

Patty Smith Hill argued that children should have freedom to adapt materials and activities to their interests and developmental levels.

While Blow and her followers remained staunchly wedded to the Froebelian model, others began to question and dissent from his views, objecting to the symbolism, formal sequence and lack of freedom of choice for children that characterized Froebel's gifts. It was Patty Smith Hill (1868-1946), however, who struck the strongest blow against the strictly Froebelian approach and who was most instrumental in the evolution of a uniquely American kindergarten. Influenced by Dewey, Hall and Thorndike, Hill retained the games, songs and activities of Froebel's kindergarten, but stripped away the nearly mystical symbolism. Children, Hill argued, should have freedom to adapt materials and activities according to their own interests and developmental levels. Her activities for children included a "housekeeping corner" and field trips, and she invented the "unit blocks" which are still in use today.

Eventually, Hill and many other educators were increasingly influenced by the child study movement and by behaviorism, a refinement of Thorndike's early learning theories as developed by B. F. Skinner (1904-) and others. As her kindergarten evolved, Hill developed a "conduct curriculum" that stressed behavioral objectives. Although activities related to Dewey's philosophy were evident in her program, many felt that the strong behavioral thrust was incompatible with the progressive elements of her program.

In 1905 Blow, who represented the conservative "pure Froebelian" stance, taught a course at Columbia University Teachers College jointly with Hill. Their disagreement triggered a four-year debate between conservatives and progressives regarding the kindergarten. Both women presented extensive reports supporting their positions to the International Kindergarten Union. Between 1910 and 1920, the philosophical base of kindergarten changed from the more conservative end of the continuum to the more progressive. A variety of influences continued to reshape the kindergarten during the second quarter of the 20th century.

The recent history of kindergarten

Arnold Gesell led many thinkers and educators to emphasize the importance of the first years of life.

During the 1920s and 1930s, kindergarten was also influenced by the work of Arnold Gesell (1880-1961). Having obtained training in both psychology and medicine, Gesell founded the Yale Clinic of Child Development at Yale University in 1911, where he made notable advances in the study of child development. His research led many thinkers and educators to emphasize the first years of life as critically important. His maturational development theory—that all human behaviors develop in a highly patterned and largely predictable way—explains development largely on the basis of nature rather than on environmental factors. When Dr. Gesell retired, his colleagues, Drs. Frances Ilg and Louise Bates Ames, left Yale and founded the Gesell Institute of Child Development (now Human Development) in his honor and to carry on his work.

From the 1930s onward, theories of different educational psychologists have predominated at different times . (Three theoretical models and their influence on kindergarten programming—maturationist, behaviorist and interactionist—are discussed in Chapter 2.) From 1920-1940, the kindergarten movement waxed and waned, responding in part to the country's economic condition. Some scholars suggest, for example, that the Depression caused a decline in kindergartens during the 1930s, and others believe that this decline was caused by the public's failure to either understand or value kindergarten.

Women working in World War II industries created a need for publicly funded child care centers.

During World War II, many American women began working outside the home. To meet a new need, numerous child care centers were opened to provide care for workers' children, with funding provided by the Lanham Act, and kindergarten increased in popularity. After the war, however, most of the child care centers disappeared and America retreated from the forefront of early childhood education.

The kindergarten has been subject to the panoply of forces which have shaped American education since the end of World War II. During the postwar "baby boom" era, programming was not subjected to much scrutiny or change. By the 1960s, however, a variety of social pressures—ranging from the civil rights movement and the war on poverty to national security, the launching of Sputnik I, and the women's movement—had profound effects on kindergarten.

Compensatory education for young children was initiated in 1965 through the Head Start Program, which emphasized child development through comprehensive services and parent involvement. Also very influential in the post-World War II period was the work of Piaget.

Swiss-born Jean Piaget (1896-1980) was one of Hall's most influential successors. Although Piaget was most prolific much earlier in the century, only in the last 25 years has his work had an impact on early childhood education. Piaget never considered himself an educator, but his theory of cognitive development has been adapted for practical application in the classroom by others.

Piaget was originally trained as a biologist. While working with Simon, coauthor of the first intelligence test, Piaget became interested in children's reasoning. By the time he was 25, he was dedicated to studying how children think. It became his life's work.

Piaget developed a theory of cognitive development, initially based on copious observations of his own three children. Through wide experimentation and interviewing of children (a technique first used by Hall), he organized cognitive development into four stages: sensorimotor, preoperational, concrete operational and formal operational. Piaget posited that all children progress through these four stages in order, though a child may operate in more than one stage at the same time. His experimentation demonstrated that kindergartners think about their world in ways that are quite different from adult thought. According to Piagetian theory, the learning environment and activities should be related to the child's stage of cognitive development to insure optimal learning. At the kindergarten age (preoperational stage), this would mean an environment that offers considerable opportunity for hands-on, concrete experiences, the chance to solve real and relevant problems, to handle lots of materials, and to learn by doing.

Although Piaget's ideas have had considerable impact on both the study of child development and kindergarten curriculum, many child psychologists and educators have expressed disagreement with portions of his stage theory. For example, many believe that the approximate ages he assigns to different stages are inaccurate and others believe some of his measures lack validity.

Today's kindergarten has been shaped by many forces—social, philosophical, economic and psychological. There are, however, three themes which can be traced throughout the history of early childhood education.

Importance and uniqueness of childhood. Acceptance of the importance of childhood and the need for adults to take responsibility for the quality of the child's life have developed historically. Early childhood educators now believe that what happens to a child during the first years of life sets the stage for later development. Because they are fundamentally different from adults, children require specialized attention during each stage of development. Chances for success in adult life are improved when adults provide children with caring homes and good educational settings.

Failure to support children properly can interfere with normal development and prevent a child from reaching his or her potential.

Goal of social reform. Early childhood education has often been viewed as a means of achieving positive social change. From Pestalozzi to Head Start, early childhood education programs have had the concrete goal of improving children's current health and well-being as well as a more abstract goal of improving their adult lives. Social reform centering on children commonly reflects the reformers' wish to influence family structure and other structures in the larger community as well.

Transmission of values. Beliefs about what children should be and do are at the heart of all child-rearing practices, both in the home and in the school. A society's social, cultural, moral or religious values determine the kind of education provided for its young people. America's Puritan founders valued hard work and Biblical theology, so these were emphasized in their schools. The educational programs advocated by others—Rousseau, Froebel, Montessori and Dewey for example—reflected the belief that children who were allowed to develop as children would become adults who could function in our ideal society. More recently, the importance of cultural heritage and appreciation of various ethnic backgrounds, as well as the rights and responsibilities of democratic life, are inherent in American educational practices. In the final analysis, debates about education are really debates about a society's most basic values. This is why educational programming is so difficult, and also why it is so important.

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Theoretical Models and Child Development 2

Theoretical Models and Child Development 2

Developing a kindergarten program involves numerous decisions and choices, all of which should be consistent with an acknowledged theoretical foundation. Program planning should be based upon what the school system believes about the nature of the learning process and about the nature of young children. Those making decisions about kindergarten in Connecticut schools will, no doubt, want their programs to reflect current thinking about young children and how they learn. They should not be unduly influenced by textbook publishers or public opinion, but rather should use information generated by research and the advice offered by early childhood education leaders.

The principle that education should be based on children's developmental characteristics is well accepted. Disagreements still exist, however, concerning the precise nature of the child's characteristics at various ages. Perhaps more controversial are differences of opinion about how children learn. In this chapter we shall see that early childhood educators generally favor interactionist learning theory and view child development—physical, intellectual and social-emotional—as a complex process involving a host of individual factors, so that normal development cannot be described in simple chronological terms.

Theoretical models

Theories about how children learn can be categorized into three general theoretical models: maturationist, behaviorist and interactionist (EPIE, 1972). Each holds different tenets about learning and has specific implications for practice. Over the years, all three have made a significant mark on education, including the kindergarten. In this section, the three theoretical models and their implications for kindergarten programs will be discussed. As an example, the traditional early childhood activity of block building will be presented as it is viewed by practitioners of each theory.

Maturationist. A central concept of maturationist theory is that knowledge exists within the child. Through the "unfolding" of innate capacities, the child's understanding of the world matures and becomes apparent. Development, therefore, is the maturing of genetically programmed patterns of behavior. Maturationists believe that much of what we come to know—concepts of time, space, language and mathematics, for example—exists in the genes at birth and emerges in successive stages with the maturation of body in a nurturing environment. Specific information—the vocabulary of the native language and the history of a given culture, for example—is acquired from the environment. The child can acquire knowledge from external sources only as maturation creates readiness for it. Thus, maturationists believe that the aim of schooling is to provide an optimum environment for the child's emerging knowledge when the child is ready to learn specific information. At the kindergarten level, this means knowledge and skills are expected to unfold naturally when individual expression and creativity are allowed to flourish within a context of play.

Maturationists assert that knowledge exists within the child and emerges in stages as the body matures in a nurturing environment.

The maturationist kindergarten focuses almost exclusively on the social and emotional development of the child in the context of the peer group. Formal instruction is generally avoided, since the typical kindergartner is not considered ready for it. The teacher is primarily an observer of children, watching for signs of development in the child's expressive activities. The

environment is designed to provide a warm, accepting setting that places few demands upon the child. Kindergarten is primarily a time of waiting for maturation or readiness for formal learning in school.

Because it is considered appropriate for the developmental stage of the five-year-old, block building is a time-honored play activity in the maturationist kindergarten. The teacher refrains from interfering with the building. Block constructions are considered reflections of maturation levels, and will become more complex as the child matures.

Behaviorist. According to behaviorists, knowledge exists outside the child in the external world and is acquired piece by piece, by mastering a sequence of sub-skills that add up to the totality of knowledge. Development then consists of progressive changes in the observable behavior of an individual as shaped by the environment over time. The child's responses to environmental stimuli are reinforced by the environment and become progressively more complex as the child achieves higher orders of learning. For behaviorists, the aim of teaching is to help the individual achieve the correct response. The learner is relatively passive, taking minimal initiative and responsibility; externally supplied reinforcement motivates learning. Behaviorists make clear distinctions among intellectual, affective and physical developments and behaviors.

Behaviorist kindergartens value quiet listening, paying attention and following direction.

The behaviorist kindergarten emphasizes mastery of specific skills which are considered prerequisites for later learning. Children are directly instructed by the teacher in a carefully planned sequence. Instruction is often presented to small homogeneous-ability groups. Qualities which support these instructional methods—quiet listening, paying attention and following direction—are emphasized. Workbooks are often used to provide practice in skills and to reinforce the teacher's lesson. Correct responses are considered the indicators of learning. The role of the teacher is to plan, carry out and evaluate instruction and to provide appropriate reinforcement for learning and behavior. Preparation for first grade is the main goal of the behaviorist kindergarten.

Block building is not an integral part of the behaviorist kindergarten. It may be used as a reward, a "free-choice" activity after a child has completed a teacher-directed task. When children build with the blocks, the teacher leaves them alone with their play while directing teaching attention to more academic tasks. If a child who is attempting to build a tall structure is unable to keep the blocks from falling, the teacher may intervene to demonstrate how to build it so it will not fall.

Interactionist. Those who subscribe to the interactionist approach believe that knowledge exists both in the child and in external reality and is constructed by the child through interactions with the physical and social environment. Development, then, consists of transformations of internal structures which are the basis for individual behavior. Development progresses through several qualitatively distinctive stages. The child is an active learner who interacts with, and adapts to, the environment. By recognizing dissonance between present constructs and new data, the individual is motivated to inquire and to extend understanding and skill. The child will attend to the aspects of the environment that can be assimilated into and accommodated with existing cognitive structures. The child constructs knowledge by questioning, forming ideas, testing and modifying on the basis of new information. The aim of education, according to interactionists, is to guide individual inquiry and to provide an environment conducive to interaction. Interactionists emphasize concrete experiences that help individuals develop cognitive structures. They believe cognition is a synthesis of intellectual, affective and perceptual-motor constructs and functioning and none of these domains can be treated in isolation.

Interactionists believe cognition is a synthesis of intellectual, affective and perceptual-motor constructs and functioning.

The interactionist kindergarten provides the child with many opportunities to interact with the physical and social environment. Kindergarten children are expected to be at a concrete level of cognitive understanding,

which determines how they perceive, understand and respond. Children's particular conceptualizations vary according to their unique constructions of knowledge. Therefore, the teacher offers experiences which children can use to develop understanding of the physical and social world. Children explore materials and engage in concrete activities that lead them to ask questions, form ideas and obtain feedback. The emphasis is on active doing by the child and the role of the teacher is to facilitate the interactive process by offering comments, questions and problem-solving situations during the child's play. Kindergarten should provide a setting and materials that suggest interesting ideas to children, and it should also allow for children to use their own ideas and agendas for integrating knowledge and for making that knowledge their own.

The interactionist approach combines certain aspects of maturationist and behaviorist learning theory.

An interactionist approach is not in and of itself a learning theory, but a general overview of methods of instruction. The interactionist approach combines certain practical and theoretical elements of both maturationism and behaviorism. For example, the interactionist believes, as do the maturationists, that children cannot exhibit certain behaviors—such as sitting still for long periods—until they are at the appropriate stage of development. Further, interactionists assume, as do behaviorists, that the environment has an active effect on the learning behavior of the child. To the extent that interactionists differ in method from either behaviorists or maturationists, they do so more from a difference of opinion as to the degree to which either nature or nurture influences learning, rather than from rejection of either nature or nurture as a factor in learning.

Block building is a valued activity in the interactionist kindergarten because it is intrinsically interesting to children and offers opportunities to involve the child's physical knowledge, structuring of space and symbolic representation. Children's play with blocks is presumed to reflect their current understanding of the world; the buildings they construct represent their understanding of spatial relationships and quantity as well as social reality. Attempting to build a tall structure, the child will try various ways of putting blocks together and observe the results; eventually, the need for a broad foundation of blocks to support a tall building is recognized. The teacher encourages trial and error in block building, leaving the child to formulate the solution.

Influence of the models on kindergarten programming

From 1900 until the 1950s, ideas about young children were overwhelmingly influenced by maturationists G. Stanley Hall and Arnold Gesell. During this period, most educators believed that heredity and biological maturation determined when and how quickly children passed through developmental stages. Accordingly, American kindergartens were led away from Froebelian roots toward the philosophy Hall and Gesell promoted. (See Chapter 1 for a history of theorists' influences on kindergarten.) The function of kindergarten became easing the adjustment to school, with the social and emotional development of the child within the peer group as the primary goal. The traditional kindergarten program reflects maturationist theory.

The 1957 launch of Sputnik I by the Soviet Union resulted in an educational turmoil felt even in the American kindergarten. National insecurity fostered by the Cold War pushed American education to do more, and do it sooner and better. At the same time, the critical importance of the first five years of life was advanced in the theories of J. McVickers Hunt and Benjamin Bloom. Many educators began to suggest that the five-year-old was capable of starting formal academic instruction. Kindergarten, they thought, could be more productive. The learning theories of

behaviorists such as B. F. Skinner and R. Gagne also had a significant impact on instructional methods. Behavioral objectives, sequential skill hierarchies and reinforcement of skills were introduced to kindergarten teachers. In short, behaviorism has had a strong influence on kindergarten philosophy and curricula over the last 25 years. As school systems have recognized the potential benefits of the kindergarten year, teaching practices that have been standard for later elementary school have been incorporated into the kindergarten, often without recognition that these practices are inappropriate and based on the behavioristic model of learning. In today's kindergarten, the pervasive use of materials such as workbooks and worksheets for developing reading and math readiness skills indicates the dominant influence of behaviorism.

Ironically, while the kindergarten curriculum has become increasingly behavioristic, developmental psychologists have moved away from behaviorism toward interactionism. Piaget's work on how children think at different stages has had a major impact on many areas of child development study. Lawrence Kohlberg has applied Piagetian principles to children's moral development. Noam Chomsky and other psycholinguists have posited theories of language acquisition based upon cognitive interactionist foundations. Also, John Downing and Frank Smith have formulated literacy development principles from an interactionist perspective.

Models for Kindergarten Curriculum Development

	The Child	The Teacher
MATURATIONIST Gesell Hall	Develops through the unfolding of genetically determined behavior patterns as the body matures Progresses through developmental stages at an individual rate. Each stage must be fully completed before the individual is "ready" for next activities	Nurtures the child, emphasizing social-emotional support Observes children for signs of readiness for the next level Avoids direct involvement in children's activities Must have understanding of child development

BEHAVIORIST	The Child	The Teacher
Skinner Gagne	Develops through being shaped by the environment as responses are reinforced Accumulates learning over time with the responses becoming progressively more complex Is shaped, as a relatively passive learner, by environmental forces within the limits determined by heredity. The source of learning is external.	As an authoritative source of knowledge, directs learning Aims to help learner's view of the world and way of doing things to correspond to the right way

The recommendations and programs advocated by many early childhood experts are consistent with the interactionist model. Texts for early childhood educators are often based on interactionist theory (Schickedanz, 1977; Spodek, 1978). Successful model programs such as the Piagetian preschool (Kamii and DeVries, 1973) and the Bank Street School (Biber, 1977) have implemented interactionist views. Through their journals and other publications, professional organizations such as the National Association for the Education of Young Children and the International Reading Association recommend practices that are congruent with an interactionist approach. In short, sound early childhood practices as espoused by leading educators in the field are generally based on an interactionist view. Unfortunately, not everyone involved in early childhood education—many textbook publishers, for example—operates from this foundation. Educators responsible for kindergarten should carefully scrutinize all aspects of their programs to insure consistency with the interactionist model. Bernard Spodek suggests, "Child development knowledge might be used most productively as an analytic tool. Educators could identify consistencies and inconsistencies in what they do, as well as develop ways of judging the consequences of their programs and the 'match' of program activities to the developmental level of the children" (Spodek, 1978, p. 47).

Curriculum Content	Curriculum Strategies
Determined by children's own interests	Facilitate the unfolding of knowledge and the addition of cultural specifics by encouraging individual expression and creativity within a context of play
Does not generally include academics	Match demands for performance to child's level of readiness
Focuses on the emotional/ affective domain	

Curriculum Content	Curriculum Strategies
Makes clear distinctions among the intellectual, affective and physical domains, which are isolated for instruction	Break down, simplify and sequence knowledge into bits which can be taught
Focuses on the intellectual domain	Stress perceptual-motor and verbal learning through verbal explanations and paired associations
Stresses mastery of a sequence of sub-skills prerequisite for later learning	Reinforce correct responses through verbal praise and tangible rewards
	Group children for instruction by intellectual ability
	Use workbooks and worksheets to provide practice and reinforcement of skills

(continued)

Developmental characteristics of kindergarten children

Although today's kindergartners may appear to be more mature than those of previous generations, they are still five years old. In spite of public perceptions or misperceptions about them, their physiological development has not been sped up. A five-year-old in 1986, like a five-year-old in 1956, is at a unique stage of development that determines how that child learns best and what his intellectual, physical and social-emotional needs are. Children can learn some skills that require more advanced levels of development than they possess. However, the consequences of this kind of learning for the kindergarten child is stress.

Describing a kindergartner is a complex task. Chronologically, a kindergartner in Connecticut is usually between 4 years 8 months and 5 years 8 months of age in September, and may be as old as six years 5 months by the following June. However, because kindergarten entrance is sometimes delayed, the September age may be as high as 6 years 8 months and the June age 7 years 5 months.

Human beings develop most rapidly in the beginning years of life. Although changes during kindergarten do not equal the dramatic motor development of the first two years of life, kindergartners continue to grow rapidly in all areas. Significant developmental changes occur between September and June. Because of their individual levels of maturity, kindergartners display significant differences at any given point in time.

Differences are compounded by the fact that children's maturity cannot be predicted by chronological age. Any child's level of maturity or sophistication in one area of development—intellectual, physical or social-emotional—may not be consistent with development in the other two areas. Because individual differences are so great and growth profiles are so diverse, understanding kindergartners requires understanding ranges and patterns of development. These concepts are discussed below.

Models for Kindergarten Curriculum Development (continued)

	The Child	The Teacher
INTERACTIONIST Piaget Chomsky Bruner	Develops through the transformation of internal structures Progresses through distinctive stages which are qualitatively different Is motivated, as an active learner, to extend understanding and skills through recognition of dissonance between current ideas and new data Constructs ideas or schemes about all aspects of physical and social world which become progressively more conventional as the child develops Learns as a function of the combined forces of maturation, social experience and experience in the physical world	Guides the learner in the inquiry process Interacts with children and encourages them to interact with each other Understands child development and the processes underlying learning generally and in each content area Provides an environment that stimulates interaction with the physical and social world

Principles and Components of a High-Quality Program

3

Developmental maturity. Because children grow and mature at different rates, chronological age is not a valid indicator of developmental maturity. Parents are aware of this during infancy and toddlerhood as they await the first tooth or the first step. They usually understand that all children do not sit, crawl, stand, walk or talk at a specific age. Each child develops according to a unique personal timetable.

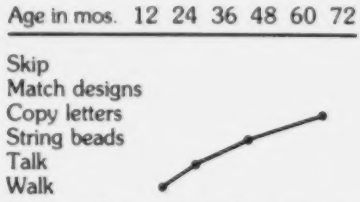
The graphs at right exemplify the developmental achievements of a typical group of kindergarten children. They indicate timetables for selected aspects of physical growth for three representative children we will call Kyle, Tim and Jane. Each child also has a timetable for intellectual and social-emotional growth. There is a natural sequence of accomplishments, and each child achieves these accomplishments at varying rates.

Children's rates of development and their levels of developmental maturity are related, but they are not identical. A timetable illustrates **rate of development.** A child's **level of development maturity** is determined by comparing an individual child's accomplishments with the accomplishments of most children of the same age. For example, Jane is 5 years 0 months old and can skip. Most children cannot skip until they are 5 years 6 months old. If Jane can perform other motor tasks not usually expected until 5 years 6 months, it can be said that Jane's level of developmental maturity in physical development is advanced. (The summaries of developmental characteristics on pages 20 through 25 can help determine levels of developmental maturity.)

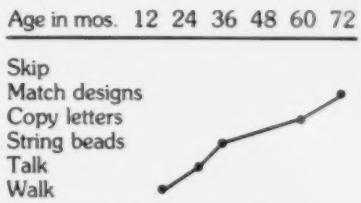
Developmental profiles. Developmental profiles are more comprehensive than a child's timetable. A timetable shows the rate of growth with respect to one developmental area. Developmental profiles illustrate how a child may mature at different rates in each of the major areas of development—intellectual, physical and social-emotional.

A child's physical, intellectual or social-emotional development may be enhanced or hindered by combinations of many factors. Physiological as well as environmental factors contribute to overall physical development.

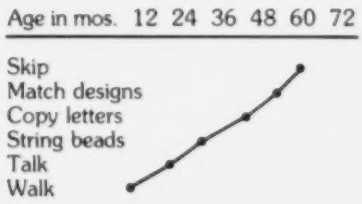
Developmental Timetables



Kyle, age 5 years 8 months, has more difficulty copying letters than Mandy, who is 4 years 10 months old.



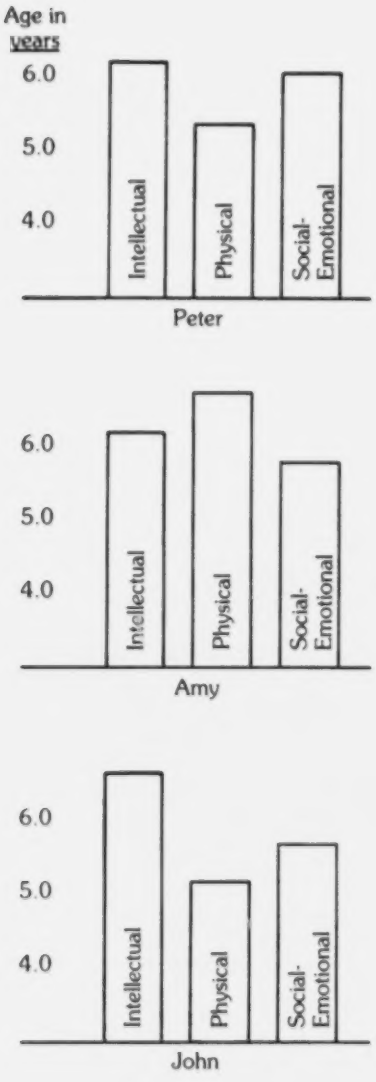
Tim, 6 years old, has more difficulty than 5-year-old Sarah when they try to match designs in a visual discrimination game.



Jane, 5 years old, can skip more easily than Meg who is 10 months older.

Curriculum Content	Curriculum Strategies
Does not try to isolate and deal separately with the intellectual, affective and physical domains	Offer the materials and time needed for children to explore and interact with the physical and social environments
Stresses finding order and relationships through concrete manipulation of the environment to help equip learners with the needed cognitive structures	Maintain the whole context for learning, to enable children to find meanings
Presents curriculum areas as models for knowing about the world which children can draw upon in their quest for meaning	Recognize that developmental stages affect children's ways of knowing, and modify expectations accordingly
	Encourage active manipulation of the environment, through play and hands-on activities, so that individuals can explore and construct social and physical knowledge

Developmental Profiles



HOW TO READ A PROFILE
Peter functions like most 6-year-olds intellectually and like most 5½-year-olds physically. He is more mature in his social-emotional development than Amy or John.

Biological inheritance may dictate body structure and function, rate of physical growth, physical defects and/or predisposition to disease. Prenatal and birth conditions may permit normal expression of hereditary traits or in some way interfere with them. Diet, rest, exercise and medical care influence the extent to which growth proceeds normally or is impeded. Illness or accident may temporarily or permanently impede growth. Emotional stress can cause temporary or permanent physical harm. Children's birth order affects some aspects of development. The degree to which the child's environment stimulates curiosity and encourages exploration and discovery influences intellectual growth. And most significantly, the degree to which parents or caregivers show approval of children, respect for their independence and support for their individuality affects social-emotional development.

Furthermore, since one aspect of development may be hindered while others are enhanced—and vice-versa—development can be uneven. The development profiles shown at left illustrate this. Peter is slower to develop motor skills than to develop intellectual functioning. Amy has advanced normally in motor and intellectual growth, but lags in the development of social skills and/or emotional stability. John is sophisticated intellectually, while his motor skills are underdeveloped. Any combination of lags, normal development and precociousness may exist across areas of development for any individual child.

Range of development. When describing the characteristics of kindergarten children, the variables discussed above suggest that the concept of "range of development" is more appropriate than the concept of a "typical kindergartner." A list of traits of a typical kindergartner can be misleading and leads to questions such as: At what point in kindergarten does each of these traits emerge? What about the child who exhibits some of the traits but not others? Is the child who seems to lag (or surpass) in almost all of the traits misplaced? Lists of traits are usually too general to be helpful.

The summaries of developmental characteristics of kindergarten children describe a range of development in each of the developmental areas. Each set of developmental characteristics can be viewed as a continuum ranging from least mature functioning to the most mature functioning within that area of development. Even though the range extends from 4 to 7 years, the behaviors included are considered normal for children between the chronological ages of 4 years 8 months and 7 years 5 months.

Using a range of development to describe a kindergarten child has several pedagogic values; it

- ☐ facilitates the planning of appropriate experiences for children's growth;
- ☐ serves as a diagnostic tool to determine a child's functioning in many areas;
- ☐ assists in the construction of developmental profiles;
- ☐ helps determine a child's need for special services; and
- ☐ suggests children's appropriate placement for their next year of schooling.

Patterns of development. In addition to understanding that children exhibit a range of development, it is important to understand that a child's development represents growth along several continua. Each of these continua includes a direction for growth, which can be viewed as a pattern of development. One of these patterns is simple to complex. In thought, in use of language and in physical development, children move from simplicity to complexity. As children mature, they can entertain thoughts which are increasingly more complicated. Similarly, they can use language more intricately and more appropriately. The musculoskeletal system, as well as neurological, digestive, respiratory and endocrine systems, all become more highly developed or complex as children grow.

Some patterns of development relate directly to only one or two aspects of the child's development—intellectual, physical and social-emotional—while others relate to all three. The primary developmental patterns are:

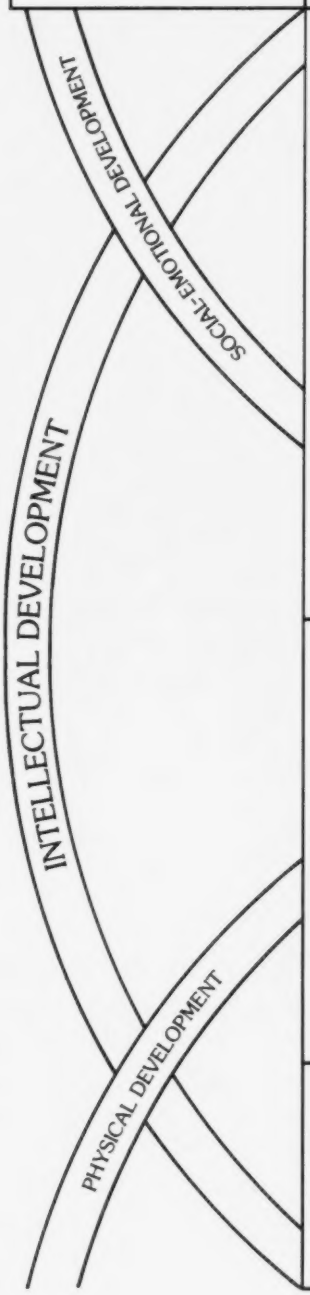
- ☐ **Egocentric to socialized** relates most closely to social-emotional development. As children mature, they become more aware of the points of view and the needs of other people, and can choose to modify their behavior accordingly.
- ☐ **Partial to complete** relates most closely to intellectual development. As children mature, they can consider more than one aspect of a situation, an object or a problem simultaneously.
- ☐ **Intuitive to logical** also describes intellectual development. Very young children cannot comprehend causality. For example, they may think that the pot makes the egg boil and ascribe causality to an object which is physically close to the resulting effect. Only as children mature, can they consider, in a logical and sequential way, all the materials and events necessary to produce a particular effect. Although there is some disagreement about the specific ages at which milestones in logical thinking are reached, the general principle is that logical thinking is quite primitive at first and becomes more and more sophisticated as children grow and interact with their environment.
- ☐ **General to specific** is illustrated in children's use of grammar. Very young children understand and use syntax in a general way. For example, they formulate a rule for past tense verbs and generalize this rule to all past tense verbs. Consequently, young children frequently say "goes" for "went", "eated" for "ate", or "sleeped" for "slept." As children gain experience, they learn exceptions to the rules and become more precise in language use.
- ☐ **Spontaneous to controlled and uncoordinated to coordinated** relate most closely to physical development. Because most young children are not yet coordinated, playing "catch" with them provides good exercise for the adult partner, who must chase the ball each time the child throws it. When very young children throw, they release with a jerky thrust so that the ball is as likely to end up behind the child as it is to come to the receiver. More mature children can throw the ball in a more controlled fashion. Very mature kindergartners, for example, can release a ball, controlling its speed and direction so that the ball reaches the catcher. As children mature, through physical growth and interacting with environment, they acquire the capacity to move their bodies in more coordinated ways.

Developmental areas are interrelated. Intellectual, physical and social-emotional development are not independent of one another; rather, they are interrelated. We accept that one's self-concept affects interactions with others and that interactions with others affects one's self-concept. Similar interrelatedness exists between other areas as well.

A child's level of intellectual development, for example, can sometimes predict potential to reason in interactions with other people. Children who can consider another person's point of view are more likely to appreciate the need to take turns or to follow a few simple rules. Ability to use language effectively can influence ability to negotiate with peers during play.

Physical development is a precursor to successful learning. Brain growth determines intellectual capacity and depends on physical maturation as well as experience to develop. Vision and hearing play important roles in learning. Neuromuscular development allows reactions—particularly in eye-hand coordination and manual dexterity—to become faster, more efficient and less variable.

TABLE 1
SUMMARY OF CHARACTERISTICS: INTELLECTUAL DEVELOPMENT



Developmental Areas	Subareas	Categories of Characteristics	Pertinent Patterns of Development	Developmental Characteristics 4.0 years	4.5 years
	Language: Receptive	Auditory memory	general to specific	can follow simple, single direction	can count by rote to 10
		Attending	egocentric to socialized	can attend for 5-10 minutes in a group setting	can stay at a self-selected task up to 20 minutes
		Comprehending	partial to complete	distorts much of what he or she hears	
		Responding		responds quickly with only partial accuracy	
		Thinking	concrete to abstract	sees inanimate things as alive	
		Sentence structure	simple to complex	uses simple and compound sentences	
	Language: Expressive	Grammar	general to specific	frequently misuses pronouns, demonstrative adjectives, tense and plurals	
		Descriptions		brief, general descriptions which lack inclusion of essential details	
		Vocabulary		may use big words, but doesn't understand their meaning	
		Verbosity	spontaneous to controlled	talks constantly; loves silly language	
		Coherence	intuitive to logical	sometimes reverses cause and effect; uses free association rather than logical order	
	Mathematical Thinking: Understanding Relationships	Ordering	intuitive to logical	can't order 10 different sized sticks	
		Conserving	general to specific	thinks quantity changes if spatial arrangement of objects changes	
		Counting objects		loses 1-to-1 correspondence easily	
		Quantifying		inconsistent in ability to count out a specific amount	
		Classifying	intuitive to logical	groups objects according to a single property	
		Patterning		can't continue a simple pattern (ABAB...)	
		Comparing quantity		understands "more", but not "less"	
		Adding/ Subtracting			
	Visual Memory	Recognizes Names/Numerals	general to specific	can recognize 1 to 10	
		Recognizes Names/Letters			may recognize a few capital letters
		Names sight words		may name labels on food containers (e.g.,"Cheerios")	
		Identifies missing item			

TABLE 1 (continued)
SUMMARY OF CHARACTERISTICS: INTELLECTUAL DEVELOPMENT

Developmental Characteristics				
5.0 years	**5.5 years**	**6.0 years**	**6.5 years**	**7.0 years**
can count from 1 to 20 by rote				
			can attend in a group setting for approximately 20 minutes	
can accurately recall details of a simple story (e.g., who, what, where)				
			thinks before responding; responds accurately, thoughtfully	
			accepts explanations of natural causation	
uses complex sentences, clauses				
occasionally misuses pronouns, adjectives, tense and plurals			uses grammar accurately; can use exceptions to syntactical rules	
			detailed, accurate, complex descriptions	
			uses vocabulary accurately, specifically	
less talkative		can inhibit talking, but still likes to play with words		
can name consequences of actions (effects)			can give source of action (cause) uses logical order of events	
can order 10 sticks via trial and error			can order 2 sets of 10 sticks each - using 1-to-1 correspondence between sets	
	can conserve quantity			
counts with 1-to-1 correspondence to 20				
can count out a specific amount to match a set of objects				
		places all objects in appropriate collections; can divide whole into subgroups; can't consider whole and parts at once		
can continue patterns (ABAB, AABB, AAB, ABB)				
		can understand "less"		
	can add and subtract using manipulatives			
can recognize and name 1 to 10			can recognize and name 1 to 20	
recognizes many capital letters		recognizes many lower case letters	recognizes and names most capital and lower case letters	
recognizes names of some classmates			sight vocabulary grows (e.g., mom, dad, I love you, stop)	
identifies 1 object or picture missing from a group of 4			identifies 1 object or picture missing from a group of 8	

Adapted from works by Ginsburg, Herbert and Opper, Sylvia, 1969; Ilg, Frances and Ames, Louise, 1965; Kamii, Constance, 1982; and LeMay, David et al., 1983.

TABLE 2
SUMMARY OF CHARACTERISTICS: PHYSICAL DEVELOPMENT

Developmental Areas	Subareas	Categories of Characteristics	Pertinent Patterns of Development	Developmental Characteristics 4.0 years	4.5 years
PHYSICAL DEVELOPMENT / INTELLECTUAL DEVELOPMENT / SOCIAL-EMOTIONAL DEVELOPMENT	Visual Discrimination	Matches shapes/designs	partial to complete general to specific simple to complex	can match simple outlines of shapes	
		Matches pictures		misses detailed differences	
		Matches letters/ numerals		can match most capital letters and most numerals 1-10	
		Assembles puzzles			can complete an 8-piece puzzle
		Assembles tangrams			can complete a simple 5-piece tangram
		Duplicates par-quetry designs			
	Fine Motor / Eye-hand Coordination	Drawing	uncoordinated to coordinated spontaneous to controlled general to specific	nonrepresentational	
		Copying		copies what he "thinks" he sees (what he knows from experience) rather than what is actually there; cannot execute oblique angles	
		Writing		makes very large, bold strokes; size of letters is inconsistent; segments letters and numerals	
		Lacing		can lace a sewing card with holes around its perimeter	
		Cutting		has difficulty cutting on given lines	
		Pencil grasp		holds pencil very high and loosely	
		Pencil stroke		makes wobbly, uneven lines	
		Directionality		makes frequent vertical and horizontal reversals; direction has little significance	
		Laterality		uses both hands when building; may write with either hand; doesn't know left from right	
		Body awareness		bumps into people/things when moving	
		Locomotion		runs; jumps with feet landing separately; gallops - all with "gusto"	
	Gross Motor	Balance	uncoordinated to coordinated	balancing on one foot is very difficult	
		Catching/ throwing		can throw a ball with only a little body motion	
		Targeting			
		Activity level	spontaneous to controlled	body is usually in constant motion even when sitting	

TABLE 2 (continued)
SUMMARY OF CHARACTERISTICS: PHYSICAL DEVELOPMENT

Developmental Characteristics				
5.0 years	5.5 years	6.0 years	6.5 years	7.0 years
	can match complex shapes (i.e., with detailed designs inscribed)			
occasionally misses differences in detail		seldom misses detailed differences		
	can match all capital and lower case letters and numerals if direction and size are held constant			
		can assemble jigsaw puzzles (up to 100 large pieces) with minimum of adult help		
		can complete complicated 12-piece tangram		
	can duplicate parquetry block designs			
		drawings are representational		
			can copy a diamond	
can copy a square and a triangle		can copy a divided rectangle	still cannot copy from a blackboard	
size of writing becomes more consistent and smaller				
•	uses a continuous line when forming a letter/numeral	wants to know how others form their letters/numerals		
	can lace a shoe		can tie a bow	
	can cut on lines most of time			
	holds pencil more firmly and lower, with 2- or 3-finger grasp			
	pencil strokes become firmer and more controlled			
	seldom makes vertical reversals; continues horizontal reversals		seldom makes reversals or self-corrects when he or she does	
		relies on dominant hand for most building; writes with dominant hand; distinguishes between right and left		
	has much greater awareness of space needed for body movement			
	can hop	can skip		
	performs locomotor movements with more control			
	can hop on 1 foot for distance of 6 feet		can stand on 1 foot with eyes closed for 20 seconds	
	can catch a ball in 2 hands if ball is thrown underhand			
	can run to and kick a moving ball		can hit a thrown ball with a stick	
	can inhibit some body movement		can sit still for up to 20 minutes	

Adapted from works by Ginsburg, Herbert and Opper, Sylvia, 1969; Ilg, Frances and Ames, Louise, 1965; Kamii, Constance, 1982; and LeMay, David et al., 1983.

TABLE 3
SUMMARY OF CHARACTERISTICS: SOCIAL-EMOTIONAL DEVELOPMENT

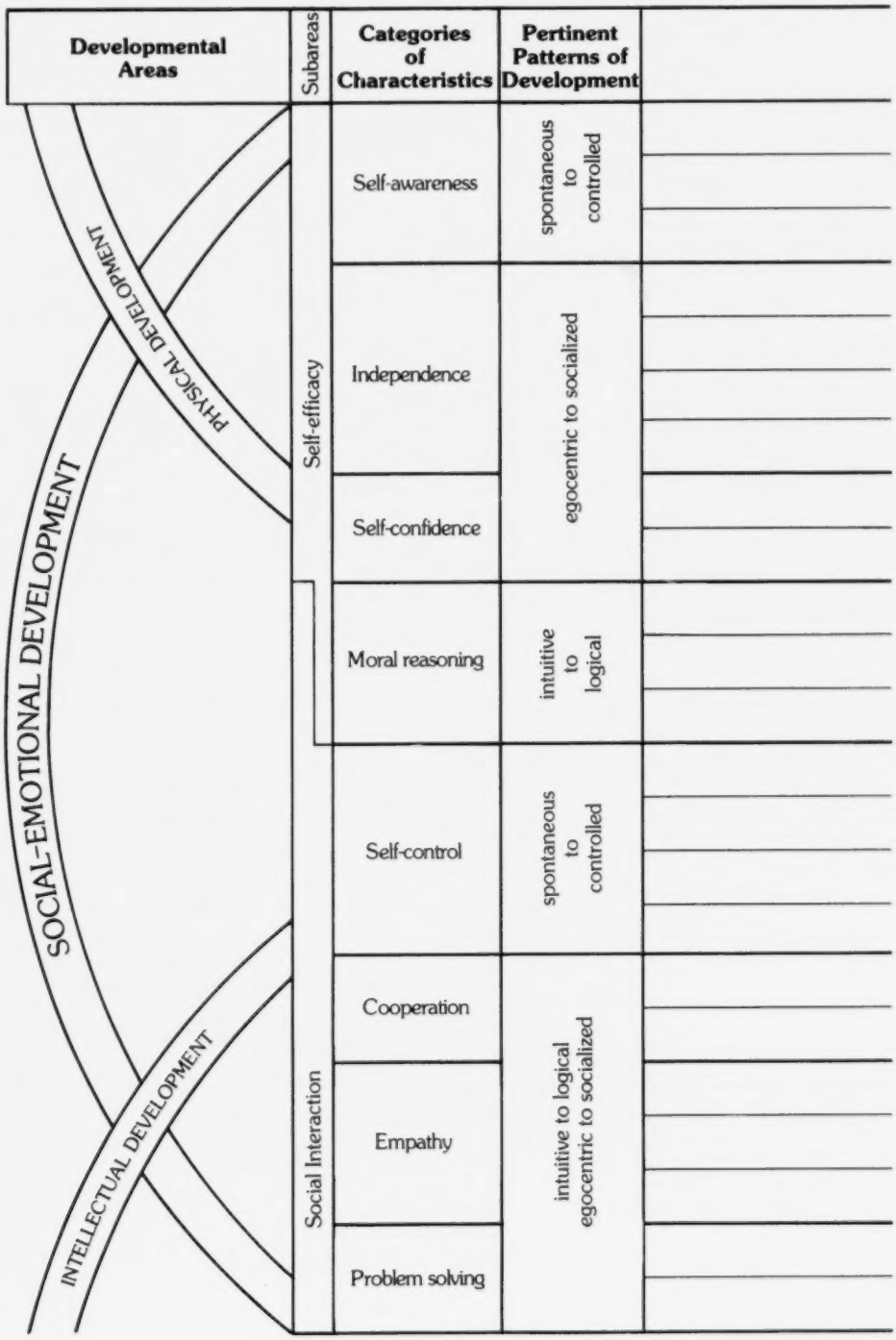


TABLE 3 (continued)
SUMMARY OF CHARACTERISTICS: SOCIAL-EMOTIONAL DEVELOPMENT

A child who needs much adult help to accomplish these tasks is...	A child who needs a minimum of adult help to accomplish these tasks is...
less mature	more mature
can describe personal likes, dislikes, strengths, limitations	
can express sexual curiosity through questioning	
is interested in the products of curriculum activities	
can separate from parent(s)/caregiver(s)	
can ask for help	
can complete simple tasks independently	
can choose appropriate curriculum activities independently	
can adjust to new situations easily	
shows pride in accomplishments	
is aware of what he/she should/should not do	
can view punishment as a consequence of breaking rules	
can consider the motive of another person as an explanation for his/her behavior	
can listen to others	
can take turns and share	
can follow a few, clear, consistent rules	
can inhibit impulsive or aggressive reactions and use words to explain feelings, instead	
can work on a task with 1 or more other children for approximately 20 minutes	
can engage in a game with simple rules	
can appreciate differences in others	
can adapt own needs to needs of others	
can offer comfort to a friend in need	
can offer reasons/alternatives for actions	
can use words to deal with conflicts over possessions	

Adapted from works by Biber, Barbara et al., 1977; Elkind, David and Weiner, Irving, 1972; Hazen, Nancy et al., 1982; Thomas, Murray, 1979; and Wadsworth, Barry, 1984.

Physical development influences social-emotional growth. A child with significantly underdeveloped motor skills may have difficulty entering play that requires certain types of movement. For example, a child who cannot handle a ball may avoid joining a ball game. A child with a physical disability may need a teacher's encouragement to enter play groups. Consequently, although we speak of each developmental area in terms of the accomplishments of the child typically associated with that area, we must remember that the areas overlap significantly. The Summaries of Developmental Characteristics which appear on pages 20 through 25 are divided according to developmental area, to identify the following:

- ☐ the major accomplishments of 4- to 7-year-old children in each developmental area;
- ☐ the patterns of development associated with these accomplishments;
- ☐ the range of development associated with this age group;
- ☐ the approximate age at which each accomplishment can be expected; and
- ☐ the interdependence of the developmental areas.

Levels of maturity, rather than ages, are used as reference points. Characteristics of kindergartners relative to social-emotional development are not easily linked to specific ages. By definition, intellectual and physical growth are physiologically based, as is the concept of age. By definition, social-emotional growth relies on interaction with other people. Physiological factors play a role, to be sure, but they do not provide the fundamental ingredient for growth in this area of development. Just as it is impossible to imagine intellectual or physical growth without a mind and body, it is impossible to imagine social-emotional growth without other people.

Most childhood experts agree that the most profound influence on the child's social-emotional development is a result of the ability of the child's parents or caregivers to:

- ☐ accept the child;
- ☐ respect the child's individuality;
- ☐ provide clear, appropriate and well-enforced limits for the child's behavior; and
- ☐ model empathy in their relationship with others.

Some experts try to assign ages to social-emotional characteristics by closely tying this area of development to intellectual development. It's true that a child's level of intellectual development can predict his/her potential for using reasoning in his/her interactions with peers and adults. A child who cannot yet consider many aspects of a problem at once will have difficulty appreciating the need to take turns. This same child will also be unaware of the potential danger of some of his/her actions. In a sense, his/her level of intellectual development prescribes his/her egocentricity. However, some children *can* share playthings, take turns, show empathy, and display other attributes of socialized behavior while they are still essentially egocentric in their thinking. Children who fit this description have learned pro-social behavior "by rote" as a result of the kinds of modeling and nurturing they have experienced through the adults in their lives. Similarly, there are children whose intellectual levels should allow them to appreciate another's point of view who cannot show empathy.

Consequently, attempts to relate social-emotional characteristics to age (based on a relationship between pro-social behavior and intellectual development) can be misleading. In actuality, kindergarten children can exhibit social-emotional characteristics found in children much younger than 4 years old and older than 7 years old. (See Social-Emotional Development chart on pages 24 and 25).

Meeting the needs of exceptional children

In addition to meeting the individual needs of children within a wide range of normal development, the kindergarten teacher is routinely expected to meet the needs of one or more exceptional children. Federal law 94-142 specifies procedures for providing an education for all handicapped children, and the Connecticut General Statutes, Section 10-76d(b)(2), through its regulations (10-76-a), requires that school districts serve identified handicapped children from the year they turn age 3 by January 1, to age 21 or graduation from high school, whichever comes first.

Some children entering kindergarten will have had special education programs and services from the age of three or younger in a public or private school setting or a day care or Head Start program. Others entering kindergarten may be able to attend kindergarten part-time while continuing to receive special services through the day care or self-contained special education settings. Some children will be best served by a program for exceptional children only. When possible, children entering kindergarten should be included in a regular classroom setting where materials, activities and equipment can be adapted to their individual needs, where services may be provided within the classroom through interdisciplinary approaches and where physically or developmentally handicapped children may be integrated with all other children.

When possible, children entering kindergarten should be placed in regular classroom settings.

To be effective in meeting the needs of exceptional children, a kindergarten program should meet the following criteria:

- ☐ Program planning should focus on both children's abilities and their disabilities, allowing for development within their areas of competence while helping them to overcome or work within their weaknesses.
- ☐ There should be room built into the program for meaningful parent involvement. Parent involvement greatly improves the child's chances for success if parents and teachers work together with a planned, consistent set of expectations.
- ☐ Special training and support should be offered teachers with exceptional children in their classrooms. Successful integration of children with special needs into the classroom depends on the positive attitudes of teachers for teaching all children. Those attitudes will be enhanced if teachers feel adequate to the job and take advantage of special education training through professional development activities. Teachers should also be familiar with state and federal statutes concerning meeting the needs of exceptional children.
- ☐ Appropriate physical environments and learning experiences should be planned. They are critical for working with children who have special needs—the handicapped, the educationally disadvantaged and the talented and gifted.

Just as children with disabilities are found in all socioeconomic and cultural groups, so are gifted and talented children. The potentially gifted or talented young child may demonstrate an intellectual and/or creative functioning superior to that of most children of the same age. Formal testing procedures for identification are not always appropriate or accurate at a young age, but there are some traits that are generally recognized as denoting some forms of giftedness. In intellectual and academic areas, gifted children may have longer attention spans, learn rapidly, have good memories and use advanced vocabularies. They may ask many questions and be able to express their ideas easily. Independent and imaginative, they may be bored by normal activities, but with challenge and appropriate stimulation, such children will do better in a classroom with peers and a program of enrichment rather than in a segregated special class. Planning

and organizing skills are evident in children's creative works. Gifted/talented children are often content to be alone, spending time in purposeful activity and in reflection. They often have a mature sense of humor, yet there may be a difference between their emotional levels of development and their intellectual ones.

Many resources are available concerning the identification process and appropriate programming for exceptional children (as determined by the Planning and Placement Team process, which provides an Individual Education Plan for each child).

The State Department of Education has a number of consultants and resource people to assist in identifying and planning for young children who may have special needs. The Bureau of Special Education and Pupil Personnel Services provides many other resources for the teacher or planner. The Early Childhood Network, under the leadership of the department and regional early childhood coordinators, provides professional training and assistance to personnel from the public school and community early childhood programs in helping to meet the normal developmental and special educational needs of young children. Additionally, The Special Education Resource Center and the regional educational service centers (RESCs) provide human resources and materials to teachers.

Implications of this chapter

When planning

Teachers and administrators must take into account how children grow and learn in order to provide educational experiences which will help children realize their fullest potential. An academic curriculum that relies on large group instruction and focuses primarily on reading, writing and arithmetic, is not appropriate in kindergarten. Teachers and administrators should remember that the variety of growth patterns and the varied life experiences among kindergarten children suggest that kindergarten learning experiences for these children must be highly individualized. Individualization can take place on a one-to-one basis or with flexible clusters of children based on specific needs or interests of those small groups. Teachers and administrators must keep in mind kindergartners' unique way of thinking, their high activity levels and their need to interact with peers to develop language and social skills. Learning for these children means hands-on exploration of many diverse materials, freedom of movement, and spontaneous talking to teachers and friends in discussions and during play.

When determining special needs

Teachers and administrators need to recognize that the developmental levels of kindergarten children are represented in far more meaningful ways by their developmental rather than by their chronological ages. Within a wide range of development, children may still be within a normal range of development and will not be in need of remediation. However, specific attention will be required for some children with special needs. When possible, provide materials, equipment and activities that can be adapted to individual needs of children within the kindergarten classroom setting.

When determining children's placement for next year

Teachers, parents and administrators need to know that expecting children to perform tasks beyond their developmental capabilities causes stress for children. Therefore, flexible programs in grades beyond kindergarten also need to be planned in order to address the individual needs and abilities of children and to eliminate stress due to inappropriate expectations.

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Principles and Components of a High-Quality Program 3

High-quality kindergarten programs will emerge if the underlying guiding principles are sound and appropriate for young children and if four components of program effectiveness—teacher qualifications, class size and adult/student ratio, curriculum and learning environment, and parent participation—are given consideration. This chapter addresses staffing, administrative support and the learning environment. Other chapters speak to the curriculum and the home-school partnership.

Guiding principles

Appropriate programs are based on how young children learn.

The phrase most often used to describe quality kindergarten programs is "developmentally appropriate." Appropriate programs are based on an understanding of how young children learn and are free of inappropriate or unrealistic expectations.

Guiding principles underlying quality programs follow.

- ☐ Different levels of ability and development are expected, valued and accepted.
- ☐ Educators accept all children and families and strive to meet their individual needs.
- ☐ Teachers consider it important to get to know a child's developmental needs, strengths, family and home.
- ☐ Curriculum and classroom practices are based on a sound understanding of child development principles.
- ☐ Each child has opportunities that
  - encourage discovery, manipulation, exploration and investigation in a child-centered environment;
  - develop independence, self-reliance, self-confidence and a positive view of life and learning;
  - foster happy, fulfilling group experiences in safe environments;
  - promote success and develop the capacity to learn from mistakes; and
  - develop competence in intellectual, physical, emotional and social areas through the guidance of skilled, understanding teachers.
- ☐ Each child has an equitable chance to succeed through flexible programs and qualified staff that
  - provide experiences with a variety of people from various cultures;
  - foster understanding and communication rather than impose value judgments;
  - set individual, realistic goals so that each child is challenged to optimal performance; and
  - seek to develop skills and attitudes that make continued learning possible.
- ☐ The physical and mental well-being of each child is of paramount importance.
- ☐ Children with special needs due to handicapping conditions are considered children first, handicapped children second.
- ☐ Play activity is respected for its value as an appropriate means of learning.

Play is respected as an appropriate means of learning.

- ☐ Children have access to multilevel experiences and activities of varying degrees of complexity. They are able to use concrete materials that allow for individual differences.
- ☐ Parents and school personnel work cooperatively to build a partnership that will support the child throughout the school experience.
- ☐ Developmental continuity is maintained among all early childhood settings: the home, prekindergarten, kindergarten and the primary grades.

Developmental Appropriateness

The concept of developmental appropriateness has two dimensions: age appropriateness and individual appropriateness.

Age appropriateness. Human development research indicates that there are universal, predictable milestones of growth and change that occur in children during the first nine years of life. These predictable changes occur in all domains of development—physical, emotional, social and cognitive. Knowledge of typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences.

Individual appropriateness. Each child is a unique person with an individual pattern and timing of growth, as well as individual personality, learning style and family background. Both the curriculum and adults' interactions with children should be responsive to individual differences. Learning in young children is the result of interaction between the child's thoughts and experiences with materials, ideas and people. When these experiences match the child's developing abilities, while also challenging the child's interest and understanding, learning will take place.

(NAEYC, 1986)

Identifying a high-quality program

There are four components in a high-quality program: teacher qualifications and training, class size and adult-child ratio, curriculum and learning environment, parent participation.

In order to identify a high quality program, we look for four components.

Teacher qualifications and training. The best programs employ teachers who have specific training in early childhood education and child development and who have experience working with young children. Such programs offer meaningful supervision and professional development opportunities, so that teachers' skills are constantly being improved and renewed.

Class size and adult-child ratio. A good quality program limits class size to 20 or fewer children and maintains an adult/child ratio of no more than 1:10.

Curriculum and learning environment. To be considered adequate, a program must have a planned, integrated curriculum, derived from sound principles of child development, that

- ☐ helps children learn in a safe environment where there is comfortable interaction between adults and children;
- ☐ provides encouragement for children to be verbally expressive and inquiring in a nonthreatening, nonjudgmental environment that allows for mistakes;

- ☐ offers a child-centered environment allowing for independent activity and play; and
- ☐ states goals and provides for adequate, ongoing program evaluation.

Parent participation. Staff members of a good quality program view parents as partners, involve them in meaningful issues and activities, and support them in their roles as parents. Parents feel welcome and free to communicate frequently with program staff. A good quality program provides for parent involvement in the child's education at home and does not limit opportunities for this involvement to those parents who are able to volunteer in the classroom.

In quality programs, parents are viewed as partners.

Three elements are essential to the provision of high quality programs like those described above—staffing, administrative support and learning environment.

Roles of the kindergarten teacher

"A teacher affects eternity; he can never tell where his influence stops," Henry Adams wrote (1907) nearly a century ago. We still believe this is true, and perhaps most true of a child's first public school teacher, the kindergarten teacher.

The kindergarten teacher serves many roles, requiring a variety of competencies and strategies that permit a focus on the whole child. All aspects of a kindergarten child's development and learning—including contact and cooperation with the child's family—are within the teacher's domain. The many roles played by the teacher may be divided into the following categories:

nurturer
observer
planner
facilitator
interactor
evaluator
communicator

Each of the roles is described briefly, along with the competencies that the teacher needs and the strategies that may be employed in fulfilling each of the roles.

Roles of the Kindergarten Teacher

NURTURER

In the child's life, the kindergarten teacher is one of many significant adult influences, supporting and extending the roles of the child's parents and preschool teachers. Nurturing young children in the adjustment to the elementary school is a critical function. Children need supportive encouragement from a caring adult to take full advantage of kindergarten and later school years as well.

Competencies

Consider the child's physical and social-emotional well-being, as well as intellectual and physical growth.

Maintain a safe environment.

Make each child feel special and valued as an individual.

Foster feelings of success in all areas of development.

Minimize stress in the classroom.

Bridge the gap between home or preschool and kindergarten.

Demonstrate acceptance of each child's individual family and cultural heritage.

Establish an atmosphere of warmth, comfort, stability, dependability and enthusiasm in the classroom.

Exhibit calmness and a sense of humor.

Strategies

Greet each child at the start of the day.

Provide time for children to share family experiences and events.

Provide each child with a "place of my own," such as a cubby for storing personal items.

Schedule time for a snack and physical activity.

Give each child some individual attention and recognition every day.

Allow children to select work which they will display on a reserved section of the bulletin board.

Write a personal note to a different child each day.

Follow a consistent daily schedule.

OBSERVER

To effectively carry out all other roles, the kindergarten teacher should be a careful and sensitive observer of young children. Observation of individual children and of the whole group is the basis for planning, implementing and evaluating the program. Observing children's behavior in spontaneous, self-initiated activities as well as that in teacher-initiated activities and routines is useful. Insights gained from careful observation are the keys to meeting the developmental needs of each child.

Competencies

Base judgments on observations.

Interpret observations within the context of the whole child.

Look for patterns in behavior exhibited at different times and in different situations.

Observe children in all areas of development—physical, social-emotional and intellectual.

Use insights gained through observation to plan, evaluate, and communicate about and with individual children.

Remain alert to the effects of the physical environment on behavior.

Maintain a written record of observations concerning each child's development.

Strategies

Keep a small note pad handy for recording anecdotes.

Set up checklists to record frequently observed behaviors.

Spend ten minutes at the end of each day to jot down anecdotes.

Choose two children each day for special observation.

Re-read records of observations regularly to look for patterns.

Use audio and video recording equipment to augment observations.

PLANNER

The kindergarten teacher plans appropriate learning experiences for individual children and the whole group. A good plan includes consideration of what should happen, why, to or with whom, when and how. Goals must be set for each class and each child. Commercially available daily plans for the kindergarten or teacher's manuals do not take into account the individual needs of a particular child and group. Locally developed curriculum guides should also be used flexibly and modified as needed.

Competencies

Establish individual and group goals.

Consider all aspects of development—physical, social-emotional and intellectual—in setting goals and formulating plans.

Develop a long-range plan that will tie the program components together through the year.

Plan both content and implementation of activity.

Plan experience related to several goals simultaneously, i.e., integrate the curriculum and relate different curriculum areas to one another.

Think ahead, clearly and specifically, about the learning potential of each activity and experience.

(continued)

PLANNER

Competencies
(continued)

Identify materials for children's self-selection, e.g., manipulatives, puzzles and blocks.

Modify plans on the basis of children's spontaneous interests and individual needs and plan for learning activities.

Plan a balance of quiet and active experiences.

Plan a balance of individual, small group and large group activities.

Coordinate supportive staff, such as volunteers, assistants and curriculum specialists.

Involve auxiliary staff in planning and/or communicating plans to them.

Discuss the day's plans with the children at the start of the day.

Develop an effective format for recording plans.

Strategies

Make contingency plans to cover unforeseen circumstances.

Involve children in the planning process when appropriate.

Create a convenient form, tailored to one's daily schedule, for recording plans.

Make frequent small changes in the environment.

Plan a new dramatic play theme each month that relates to a current topic.

Plan variations on usual activities.

Hold a class meeting at the beginning of the day to discuss plans.

Set individual long-range goals which can be shared with each child's parents.

Integrate curriculum areas into a unit based on children's own interests.

Communicate regularly with classroom assistants by way of meetings, message boards and other devices.

(For specific activity suggestions related to the planner's role, see Part II of *A Guide to Program Development for Kindergarten*.)

FACILITATOR

An important role is the facilitation of learning by fostering interactions with the physical and social environment. As a facilitator, the teacher sets the stage for learning and supports the learning process. In contrast to instruction, facilitating goes beyond imparting knowledge.

Competencies

Produce a wide variety of experiences and materials to give children ample opportunities to interact with their environment.

Encourage children to work together and independently when appropriate.

Provide ample time for children to become immersed in learning experiences.

Organize the physical space to encourage exploration, independence and harmony.

Provide needed information and resources.

Encourage children to take responsibility for classroom materials.

Create attractive displays and learning areas.

Establish appropriate limits and expectations for behavior and guide children toward meeting them.

Promote group cohesiveness, self-respect and respect for others.

Assist children in resolving conflicts in a positive way.

Promote children's decision making and critical thinking.

Encourage children to select meaningful activities and to complete them.

Strategies

Allow children to complete unfinished works-in-progress—block structures, for example—the next day.

Keep classroom rules simple, clear and stated in a positive way.

Use puppets and role play to help children develop positive social skills.

Develop a nonwritten sign-up system, such as a pegboard, for activity choices.

Allocate a large block of time for children to become involved in activities.

Organize materials into activity centers.

Label areas where curriculum materials are stored, so that children can easily replace them.

Show children how to clean tools and materials, such as paint brushes, after each use.

Introduce at least one new material or activity each day.

Teach childen about the care and storage of new materials.

INTERACTOR

The kindergarten teacher should play an active role in all children's experiences by sharing in children's interactions with the physical and social environment. The teacher as interactor can extend children's current knowledge and skills through mutual participation in experiences. Becoming a partner in the learning process makes the teacher a resource and a stimulus to thinking and growing. The interactor views learning as a process requiring problem-solving and exploration.

This role applies to child-selected or teacher-initiated activities, and to social stituations as well. It is critical for maximizing the learning potential of kindergarten activities.

(continued)

INTERACTOR
(continued)

Competencies

Raise questions and make comments that add to children's information and that extend understanding of exploration and experiences.

Recognize the learning potential in all activities.

Time appropriately the initiation of teacher interactions to avoid unnecessary interference with children's exploration.

Model effective, positive strategies in social relationships.

Offer encouragement and support to help children make their own discoveries and solve their own problems.

Know the individual child's current level of understanding.

Extend, enrich or simplify activities to make experiences more meaningful to individuals.

Encourage children to question their current ways of looking at the world.

Probe sensitively children's comments to find out the meaning behind their words.

Strategies

Ask "What if. . .?" or "Why do you think. . .?" as children explore materials.

Respond to children's endeavors with, "What did you discover?" or "Can you try it in a different way?"

Refrain from telling children to answer a problem.

Play alongside children with manipulatives such as sand or blocks, and talk about what is happening.

Join dramatic play by taking on a role and then providing information and vocabulary to enrich the play.

Be available to interact with children in their play and self-selected activities as well as in teacher-oriented tasks.

Circulate around the room as children pursue activities.

EVALUATOR

The kindergarten teacher is responsible for evaluating children's learning and development. Individual evaluation is not merely a summative judgment of achievement; it is an ongoing process designed to enhance each child's possibilities for success. In addition, the program itself must be assessed to be sure it is effective and appropriate for the children in that particular classroom. For kindergarten, evaluation is primarily subjective and informal (see Chapter 6).

Competencies

Understand normal sequences and ranges in all areas of development.

Be aware of different learning styles.

Discern each child's development and level of understanding in ongoing activities.

Recognize children's special needs.

Use skillfully a variety of evaluation techniques, such as observing, questioning, inventories and task-setting.

Use evaluative information to set new goals and individualize planning.

Evaluate the results of formal tests and screenings in light of the child's daily classroom behavior.

Evaluate in a positive, nonthreatening and encouraging manner.

Minimize competition among children.

Assess regularly the suitability of classroom organization, arrangement, management, routine and program content for the children's changing development.

Strategies

Record evaluative observations, anecdotes, summaries and other information on an index card for each child.

Develop a checklist to record the various skills and concepts individual children master.

Collect evaluation data both directly through observation and indirectly through children's products.

Keep dated samples of work in a file folder for each child.

Use a camera to record nonpermanent products such as block constructions.

Avoid comparisons of children.

COMMUNICATOR

The kindergarten teacher's role as communicator involves both communication about individual children and communicating to other adults about the kindergarten program. Parents, other staff, preschool teachers, administrators and the general public all need to receive communication from the teacher, because gaining the understanding, trust and cooperation of all concerned is essential. Effective communication enhances all other roles.

Competencies

Be able to state clearly the program philosophy and practices.

Summarize children's individual development and needs clearly and positively.

Seek ways to open lines of communication.

Maintain an attitude of cooperation and mutual respect.

(continued)

COMMUNICATOR

Competencies
(continued)

Use a variety of means for communication, e.g., conferences, meetings, newsletters and visits.

Develop an effective system of regular reports to parents about their child's progress.

Strategies

Write a monthly newsletter about classroom activities to send to parents and administrators.

Prepare a slide presentation of the kindergarten program for parents.

Make home visits during the school year.

Encourage parents and administrators to visit the kindergarten to see a normal day.

Begin each parent conference with a positive comment about the child.

Send an occasional "good news" note home with a child to convey some accomplishment or notable quality.

Meet regularly with colleagues, such as other kindergarten teachers, first grade teachers and local preschool teachers.

Seek the representation of the kindergarten teachers on local planning and policy committees, such as curriculum revision groups.

Implications. The competencies and strategies described represent goals to which every kindergarten teacher should aspire. The experienced kindergarten teacher will possess many of the competencies listed and perhaps uses some of the sample strategies. Other competencies may not be as well developed, and any individual teacher may require various forms of support to develop or refine them.

The role descriptions, competencies and strategies provided in this section offer guidelines and information which may be useful for the following:

- ☐ teacher self-evaluation;
- ☐ staff development programs;
- ☐ hiring and orienting new kindergarten teachers;
- ☐ helping prepare teachers experienced in other grades to teach in kindergarten;
- ☐ increasing staff and public understanding of the kindergarten teacher;
- ☐ teacher planning of time allotment; and
- ☐ considering issues of class size, adult/child ratio, and extending the kindergarten day.

Class size and adult/child ratio

In Taylor's review of the literature (1977), a majority of the studies of the relationship between class size and academic achievement indicated that smaller classes are more effective than larger ones. In an examination of classroom and school readiness measures, Ruopp et al (1979) found consistent, statistically significant and developmentally meaningful effects

resulting from class size. Desirable child behavior, frequent adult/child interactions and accelerated gains on tests that predict school success are all generated in small classes. Children in smaller classes also engage in more divergent thinking, grow in basic skill proficiency, and develop more positive attitudes (Virginia House of Representatives, 1980).

Beckner's review of research on kindergarten class size concluded that smaller class size was more beneficial than larger class size, contributing to children's academic, social and emotional development and to teacher effectiveness and teacher satisfaction. Beckner et al. (1978) concluded that the kindergarten classroom should not exceed 20 children, and they recommend an optimal number of 15 to 18 per class.

Small classes permit teachers to individualize instruction.

Small classes produce better results because they allow teachers to individualize instruction, to keep in touch with children's and parents' needs and to vary instructional methods. Large classes impose heavy physical and psychological demands on teachers, which may result in little or no time for continuing their own education and intellectual growth. For all these reasons, the Connecticut State Department of Education recommends a class size of 20 or fewer children and an adult/child ratio of 1:10. This recommendation is also supported by the Connecticut Early Childhood Education Council (1983) and the Connecticut Association for the Education of Young Children (1984). It is hoped that this goal will be addressed by staffing kindergarten classrooms with teachers who are trained in child development and in early childhood education and who have had supervised experience with young children. In a kindergarten classroom, bustling with energetic children who are busy with a variety of learning activities, is one teacher enough? The adult/child ratio recommendation means that every kindergarten teacher should be supported by a paraprofessional assistant.

Auxiliary staff. In addition to the paraprofessional assistant(s) necessary to provide the recommended adult/child ratio in the kindergarten classroom, curriculum specialists, student teachers and volunteers can also make invaluable contributions. The roles of each of these types of auxiliary staff are discussed in this section.

Paraprofessional teacher assistants. Although salaried paraprofessional teacher assistants may lack certification in early childhood education, they are crucial to the day-to-day operation of the kindergarten. Who are these helpers? They may be mothers or fathers who desire part-time work, young people interested in social service careers, retired persons (including former preschool and kindergarten teachers) or part-time college students who want classroom experience. Assistants commonly support and reinforce chidren's learning as directed by the teacher. Because they know the daily routine, save teacher time, maintain classroom consistency, and help the learning process in general, teacher assistants are indispensable.

Assistants support and reinforce children's learning as directed by the teacher.

Ideally, assistants are trained in early childhood education before they are hired; however, in those rare cases where school districts must hire teacher assistants who have not been trained, the district must assume responsibility for their ongoing professional development. Early childhood educators, and kindergarten teachers in particular, are adamant about the need for trained teacher assistants.

The quality of the working relationship between the teacher and the assistant depends on good planning and communication. For example, the assistant must understand and accept the teacher's philosophy and expectations. During daily planning/evaluation sessions, the teacher and assistant can compare observations and experiences and plan activities for the following day or for the future. Although the teacher has the ultimate responsibility in the classroom, the assistant must be respected as a talented, professional assistant/coworker rather than as a custodian.

Duties of the Classroom Assistant

The tasks assigned to a trained paraprofessional assistant are limited only to the imagination of the kindergarten teacher and the assistant. The following list offers some possibilities:

- accompany children on field trips
- take children to school library
- help with holiday projects
- tie shoes, put on boots, smocks
- mop up spills
- take children to the lavatory
- work on a parents' newsletter
- act as a scribe for young author
- print children's names on books, signs, cubbies, etc.
- help child with math skills
- retest a child who needs it
- work with a handicapped child
- listen and talk to a shy child
- help pass out smocks, etc.
- bind books that children have written
- collect money
- help teacher with record keeping
- help with art, craft, cooking activities
- construct learning materials
- transcribe a tape recording
- address and stuff envelopes
- help with bus, lunch duties
- listen to a child read
- play learning games
- preview and/or show film, filmstrip
- read to a child or a group of children
- pass out equipment, supplies
- operate audiovisual equipment
- help children put away materials

Specialists serve as resources to classroom teachers.

Curriculum and support service specialists. These specialists can enhance kindergarten programming directly and indirectly. They usually serve one or more schools and cooperate closely with school principals, with one another, and with classroom teachers as well.

Art, music, physical education and library media specialists are generally associated with teaching in the elementary grades, but they can make valuable contributions in the kindergarten classroom as well. Art, music, physical education, movement, creative drama and children's literature are, after all, the basics of a kindergarten curriculum. Children benefit not only from the specific classroom activities these teachers provide, but also from the experience of working with a different adult in the classroom. It is important to note that while the specialist may provide enrichment and work cooperatively with the classroom teacher, the classroom teacher has the primary responsibility for the kindergarten program and for integrating what the specialists have taught into a nonsegmented curriculum.

Reading/language arts, mathematics, science, social studies and foreign languages specialists, where present, also have much to offer the kindergarten program. They can serve as resources to the kindergarten teacher, can provide ideas for appropriate programmatic materials, can observe and do model teaching and can help to support the integrated curriculum approach to teaching.

Support service specialists with whom teachers may work include the school nurse, speech and hearing or language development specialist, social worker, psychological counselor, guidance counselor and special education teacher. These specialists also offer invaluable advice and service to the kindergarten classroom.

Volunteers. Volunteers may be parents who have special interests or abilities that they want to share with children, high school and college students who are interested in a teaching career, community law enforcement and public safety personnel, business people and professionals (doctors, lawyers, scientists, engineers, etc.), artists, musicians, crafts people, retired teachers and/or administrators, or grandparents and other senior citizens. Ideas about how to provide volunteers with an effective role in the kindergarten classroom are discussed in detail in Chapter 7, "Building A Home-School-Community Partnership."

Other school personnel. Because children are affected by all people with whom they come into contact, all school personnel should relate well to young children. It is very important that cafeteria, custodial and secretarial staff, as well as other teachers, understand the philosophy and goals

All school staff members should understand the philosophy and goals of the kindergarten program.

Specialists in the Classroom

In order to determine how effectively specialists are used in their classrooms, kindergarten teachers may wish to ask the following questions (adapted from "Consultant Services," in Robison, 1983, pp. 462-63).

Does the specialist:

- ☐ make him/her self available in the kindergarten to help during the first week of school?
- ☐ consult with parents, evaluate children, make further referrals, if necessary?
- ☐ prepare Individual Educational Programs (IEP) when appropriate?
- ☐ help kindergarten teachers group children for instruction?
- ☐ hold meeting(s) to orient kindergarten children and/or parents to school?
- ☐ act as workshop or discussion leader at the kindergarten parent meetings?
- ☐ advise the kindergarten teacher, after observing a child in the classroom, on ways of handling children with special problems?
- ☐ attend community meeting(s) and speak for the school in community or professional meetings?
- ☐ screen childen for problems?
- ☐ work in the kindergarten classroom with a remedial student, if necessary?
- ☐ supply special curriculum enrichment and remedial materials when needed?
- ☐ teach demonstration lessons in the kindergarten?
- ☐ collect notices for local media about exemplary work and student progress as well as regularly scheduled meetings?
- ☐ keep teachers informed of new research and new professional resources in the field (including professional conferences, journals, pamphlets and books)?
- ☐ help teacher select new instructional materials, equipment and supplies?

of the kindergarten program, communicate well with children and cooperate with kindergarten teachers. If these adults greet the kindergarten children warmly, reflect caring attitudes toward them and include them in some special activities related to their own responsibilities, they can add to children's love for school and to their ability to relate to a variety of adults. For example, bringing a message to the school secretarial staff, preparing a snack with the school lunch staff, helping the custodial staff in cleanup activities or a school pride project, and talking with teachers of other classes all can lead to mutually satisfying relationships between children and adults.

Staff selection and professional development

To fulfill competently the roles described earlier, the kindergarten teacher must have a broad background in the liberal arts and be specifically trained in early childhood education. Every teacher who accepts the serious responsibility—as well as the special joy—of working with young children must have formal training in the philosophy and methodology of early childhood education. Teachers must know what constitutes effective and positive learning experiences for early childhood at all developmental levels. To assist in the evaluation of new graduates who have specialized in early childhood education, a summary of national standards, suggested by the National Association for the Education of Young Children (NAEYC), in relation to the teaching competencies adopted by the Connecticut State Department of Education (SDE), may be helpful (see Appendix). The Connecticut competencies have been phrased as questions to help in evaluating candidates.

The standards and competencies are also useful in evaluating veteran teachers who have had experience at upper elementary levels and are being considered as kindergarten teachers. Although seasoned elementary teachers are capable of teaching children in a wide range of age and grade levels, it is essential to consider that by moving to a kindergarten classroom they have moved into a new age category, that is, the early childhood years. Teaching kindergarten requires skills both in relating to young children's social and emotional needs and in providing a developmentally appropriate program for them. Such teachers may need some retraining to meet the needs of younger children. Frequently, these teachers return to teacher preparation colleges, but school districts should also offer professional development programs for them.

In addition to providing professional development programs for experienced teachers who wish to begin kindergarten teaching, many districts offer valuable programs for new teachers. Experienced kindergarten teachers, too, can benefit from the opportunity to reinforce and strengthen competencies.

The Connecticut State Department of Education, Bureau of Professional Development (1985), offers a set of guidelines for effective, comprehensive professional development programs. Sub-guidelines adopted for use in evaluating professional development programs for kindergarten teachers are posed as questions for curriculum consultants and directors of professional development programs.

Excellent sources for assistance in implementing these guidelines are the meetings, conferences and publications of national professional organizations, their state/provincial and local affiliated groups, regional educational service centers, and consultants in the State Department of Education, Bureau of Curriculum and Instruction.

Guidelines for Effective Professional Development Programs

A strong commitment is made to professional development.

- ☐ Is an appropriate individual responsible and accountable for the professional development of kindergarten teachers?
- ☐ Is sufficient time allocated for individuals to assess the needs, plan activities for, lead, participate in, and evaluate the kindergarten development program?
- ☐ Is sufficient budgetary allocation made to support the professional development program for kindergarten and for teacher participation in the program?

Professional development programs are carefully planned.

- ☐ Is the professional development program designed to improve kindergarten student learning through improving the skills and knowledge of their teachers?
- ☐ Is the professional development program planned collaboratively with significant input from those whom the program is designed to assist?
- ☐ Is the professional development program based upon thorough assessment of individual and collective needs?
- ☐ Is the professional development program designed to reflect current concerns and issues related to curriculum?
- ☐ Are clear objectives established for the kindergarten?
- ☐ Will future kindergarten programs be ongoing and cumulative in their design?

Professional development programs recognize individual differences.

- ☐ Are varied types of opportunities incorporated, including workshops, conferences, institutes, courses and in-school discussion sessions?
- ☐ Is the professional development program tailored to meet the diverse needs of teachers with a wide range of knowledge, skills and circumstances?

Professional development programs are effectively conducted.

Does the professional development program:

- ☐ blend content with effective pedagogy?
- ☐ entail active participation?
- ☐ address concrete, day-to-day problems of teachers?
- ☐ integrate theory and practical application?
- ☐ communicate objectives to participants?
- ☐ provide opportunities for classroom practice of new skills and techniques?
- ☐ incorporate support and follow-up activities?

Professional development programs are systematically evaluated.

- ☐ Will the professional development programs be evaluated to determine whether the needs they were designed to meet have been satisfied?
- ☐ Will the evaluation results be used to improve and to develop future programs?

Source: Connecticut State Department of Education, 1985

Administrative Support

Designing and implementing a child-centered, high quality kindergarten program requires full and complete administrative support for every component of the program. Gaining the support needed is only possible when administrators have a very clear understanding of what constitutes the best early childhood program. Thus, it is imperative that all administrators who have responsibility for developing, administering and evaluating early childhood programs attend early childhood professional development programs. Some administrators may also wish to take a course in early childhood education. The goal is to insure that those who make and/or monitor policy are well versed in the basic elements of successful and effective programs.

'Ownership' of the program at all levels is extremely important.

Because the best educational decisions evolve from a shared responsibility with teachers and parents, creating cooperative "ownership" of the program is extremely important. Such an approach will enhance the opportunities for administrators and teachers to help parents—as well as staff members working with different age levels—to understand that although pressures for each achievement have intensified in recent years, the ways a four- or five-year-old child grows and learns have remained constant. The world has changed. Children have not. There is no way to speed up the process of how they grow, develop and learn. The basic kindergarten curriculum must revolve around language and play activity, and it must accommodate different and varied rates of growth and development (Seefeldt, 1985).

Yet, even when responsibility is shared, in the final stages of decision making, it is the administrator who must support, clarify and defend the program and who must persuade those with fiscal responsibility and authority to provide sufficient funding to deliver the best educational program possible to the community's young children.

A community can adopt numerous approaches and philosophies in designing its early childhood programs: The consistent key to success is the diligent search for the best program possible, one which provides the greatest benefit for the children.

Administrators must also give top priority to staff selection. Hiring the best qualified teachers, coupled with effective and ongoing professional development programs, is tremendously important. In some instances, contractual requirements play a major role in staff assignments. However, it is the responsibility of administrators who make staffing decisions to insure that only teachers with appropriate training, background, compatible philosophy, and desire are assigned to early childhood classrooms.

An extremely important concept that must be emphasized by administrators is the need for a carefully planned continuum of educational experiences throughout the elementary grades. The range of individual differences in experiential background and developmental levels is greater in the early childhood/kindergarten years than at any other stage of education. Effective kindergarten teachers meet each child at his or her developmental level, a guiding principle which should be carried on through all the grades in a learning continuum. **Kindergarten teachers should not be expected to "get children ready" for first grade any more than first grade teachers should "get children ready" for second grade. They provide for each child the program, materials and services that are appropriate for that child's present learning level. This "continuum philosophy" is a must if we are to meet children's needs first and academic requirements thereafter.**

Numerous studies have documented that the principal plays a most important role in programming for kindergarten children. Principals can insure that programs are beneficial rather than harmful by encouraging the development of programs that are designed "not so much to accelerate the intellectual growth of the young child, as to provide numerous enriching experiences which build a solid base for successful learning in later years" (Seefeldt, 1985). Teachers need the principal's full support and assistance to adapt the school program to the child's learning styles, rather than forcing the child to conform to any "pre-cast" educational mold (Doud, 1985).

The final key element administrators can provide for high quality kindergarten programs is an effective and consistent communication system that provides parents, the community and other staff members with a clear understanding of the kindergarten program. Communication should provide for a full description of all available options, the connection between the kindergarten program and those for the other elementary grades, and the channels by which parents, teachers and the community may learn more about the program or make suggestions related to the achievement of their common quest—providing the best program for every child in the kindergarten.

The Learning Environment

Children respond to places as well as to objects and people. Places can be frightening or friendly (Leeper, 1954). Thus the learning environment—all physical facilities, equipment and materials—must be carefully selected for their relationship to the total learning situation and to children's development. The school environment should invite children to participate in activities and to have experiences through which they may learn the joys of discovery, exploration, creation, experimentation and observation. This means a quality kindergarten requires many types of materials and equipment appropriately arranged in a suitable space.

Quality programs require many types of materials and equipment.

Because the environment reflects the program goals, teachers must have a clear idea of these goals before attempting to make the environment compatible with them. The environment includes the physical and human qualities that, in combination, create a place for adults and children to work and play together. It is comprised of physical space and atmosphere. Teachers make choices relating to the physical setting (equipment, materials, room arrangement and facilities), the temporal setting (scheduling and pacing of the day), and the interpersonal setting (the nature and number of children and teachers, and their relationships). The physical setting is described in this section.

Indoor space. The kindergarten classroom space should be adaptable, flexible, livable and welcoming. The amount of space should be adequate for the children to move about easily and also to accommodate a variety of activities and grouping patterns. Qualities to be considered in planning the facilities are described in "The Learning Environment" (page 50).

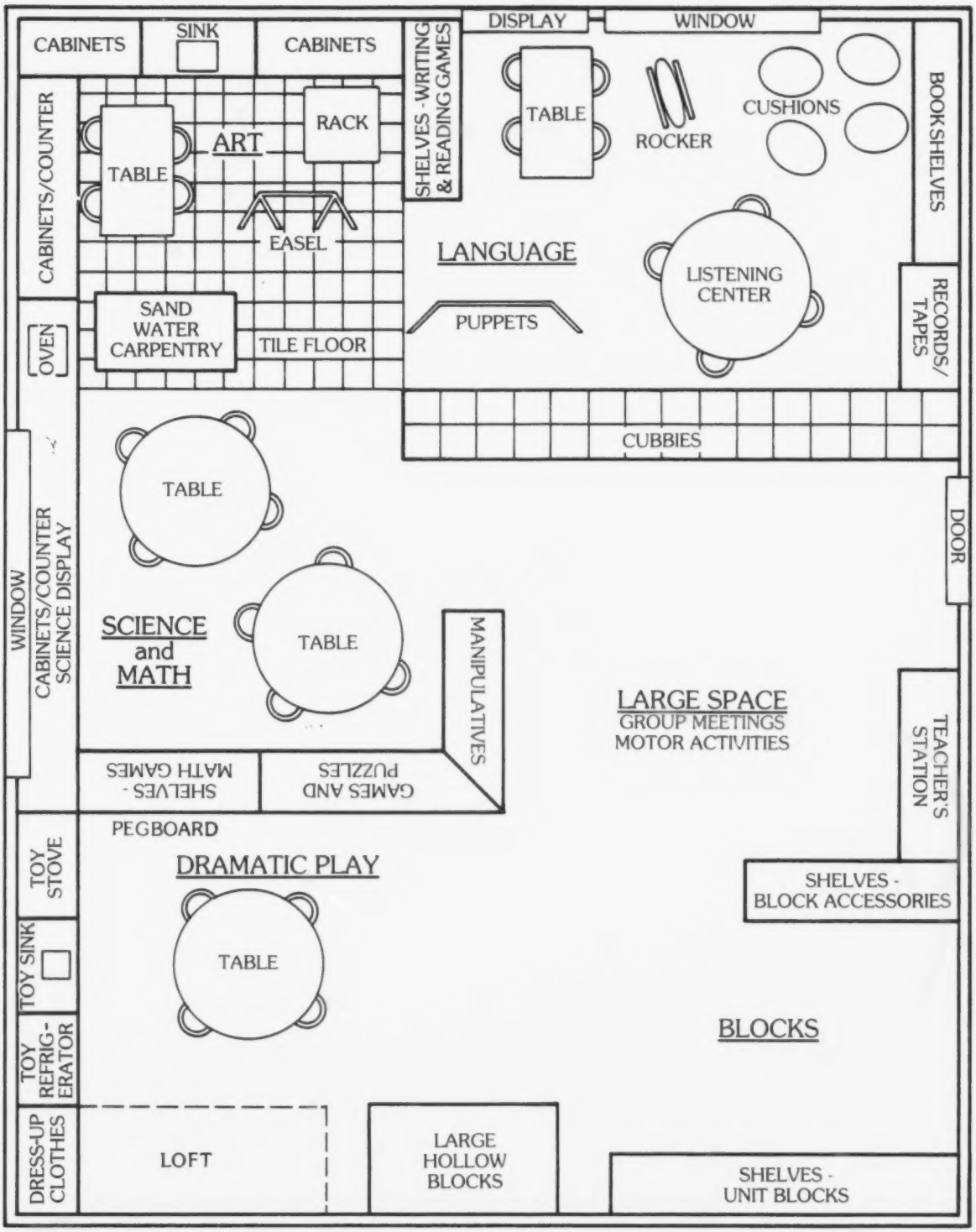
The arrangement of the equipment and materials within the physical space of the classroom can enhance or interfere with the learning environment. Space should be arranged to further the goals of the kindergarten program. In a kindergarten where the interaction of children with each other, with staff, and with materials is valued, an arrangement of space into activity centers is particularly effective. (See the sample floor plan, page 51.)

The Learning Environment

Children Need to:	The Environment Should:
Have an opportunity to make choices and participate in independent learning.	—Be arranged to encourage free exploration and provide a clear view of what is available. —Offer a variety of activity centers so children can explore, manipulate, probe. —Allow large blocks of time for play so children can make more than one choice.
Be treated as individuals, with unique strengths and developmental goals.	—Provide private as well as group spaces so children can experience cooperative and solitary play. —Insure that children have easy access to teachers and materials. —Be equipped with materials that will match the development level of the children.
Learn to be part of a group.	—Be set up for interactive learning play with room for four to six children in centers, adjacent easels and swings, multiples of materials such as telephones, vehicles and puzzles. —Allow time for both small and large group activities. —Provide activities that will stress cooperation and social interaction.
Become responsible for the environment and take care of the materials and equipment.	—Provide clearly designated storage for materials. —Allow time for children to be instructed in the proper use and care of materials. —Allow time for cleanup in the daily schedule.
Be aware of the appropriate behavior expectations in the school setting.	—Arrange room to avoid runways and dead ends created by furniture. —Allow adequate space and materials to accommodate the number of children allowed in each center. —Allow plenty of time for transitions so that children can move calmly from one activity to another. —Communicate behavioral limits through the arrangement of space and materials, such as including soft pillows and lighting to denote quiet areas.
Be with adults who will supervise and facilitate play, and encourage learning throughout the day.	—Be set up before children arrive so teachers are free to be with the children. —Allow the teacher visual access to all areas of the classroom and playground.

(Adapted from Gordon, A. and Browne, K. *Beginnings and Beyond: Foundations in Early Childhood Education.* Albany, NY: Delmar, 1985.)

SAMPLE KINDERGARTEN FLOOR PLAN



Arranging Classroom Space

Rooms

- ☐ for kindergarten or first grade pupils, shall not be located above or below the floor of exit discharge (Connecticut Fire Safety Code, Ch. 9, *Educational Occupancy).*

Walls

- ☐ abundant display space at children's eye level
- ☐ subdued color to serve as background for people and materials
- ☐ fire retardant and nonasbestos acoustic material, such as porous vinyl
- ☐ movable walls or partitions to modify space divisions according to needs

Floors

- ☐ carpeting for warmth and comfort as children play on floor
- ☐ washable tile "wet area" for messy activities
- ☐ nonasbestos acoustic material

Windows and doors

- ☐ windows at children's eye level
- ☐ windows fitted with darkening devices, such as shades, blinds or drapes, and screens
- ☐ windows able to open for ventilation and egress, preferably with cross-ventilation
- ☐ windows ample to provide abundant natural light
- ☐ doors light enough for children to handle
- ☐ exit directly to outside play area, desirable

Utilities

- ☐ electric outlets every 9 feet
- ☐ nonglare lighting: natural light, fluorescent panels, soft incandescent lighting for separate interest centers
- ☐ safety guards on heaters or radiators
- ☐ child-size sink and drinking fountain
- ☐ controlled water temperature
- ☐ bathroom with child-size toilet in the room or nearby

Furniture

- ☐ movable and storable
- ☐ durable and easily cleaned
- ☐ comfortable and attractive
- ☐ tables of varied types according to purpose and use (trapezoids are especially flexible)
- ☐ chairs: stackable, lightweight, appropriate sizes, variety of types (hard and soft, rockers)

Storage

- ☐ coatroom with hooks for coats and a low bench/shelf for boots
- ☐ cubbies for children to store personal items and materials
- ☐ open and closed shelves and cupboards for materials
- ☐ movable storage units
- ☐ some storage accessible to children
- ☐ storage units backed with pegboard, bulletin board or additional shelving to increase usefulness
- ☐ special storage accommodations for large paper, riding toys, blocks, bulky teaching materials
- ☐ ample counter space for storage, displays and work surfaces
- ☐ work space for teacher, preferably outside of main classroom

The following points should be considered in arranging a kindergarten classroom for active exploration and interaction:

- ☐ Select centers based on the goals for learning and the individual characteristics of the children in the class.
- ☐ Organize centers into clearly defined areas. Shelves, dividers and tables can be used to create L- or U-shaped areas.
- ☐ Each center should include both storage facilities and work/play space.
- ☐ Provide ample and distinct storage. Shelves, containers, waste baskets and supplies should be labeled with symbols or pictures. This will encourage children to clean up and put away materials.
- ☐ Separate centers for noisy activities from those for quiet activities.
- ☐ Arrange the centers to divert traffic from areas where it would disturb work or cause accidents.
- ☐ Locate centers near facilities (such as electrical outlets, light sources or water) needed for the activities.
- ☐ Place related areas adjacent to one another, such as dramatic play near large building blocks.
- ☐ Arrange centers so that they are easily visible to the teacher.
- ☐ Provide enough materials, space and equipment in each center to accommodate the desired number of children.
- ☐ Adapt the physical environment and arrangement of space whenever necessary to meet children's changing needs.
- ☐ Include some spaces that offer softness and seclusion for relaxed, quiet or individual activities, such as reading picture books or resting. Pillows, rocking chairs, rugs and boxes can be used in this way.
- ☐ When possible, arrange equipment and space to serve more than one purpose at different times during the day. For example, the space used for gross motor activities might also be used for whole group meetings; the housekeeping table might also be used at snack time.
- ☐ Be creative with limited space. Replace the teacher's desk with a file cabinet and small table; use an open closet as a small center; use adjacent outdoor and hallway space; use vertical space by building a loft.

Equipment and materials. A variety of well-chosen materials and equipment is as essential to the kindergarten as textbooks are to the upper elementary grades. Children need materials and equipment that exercise their minds and bodies through experiences involving manipulating, creating, constructing, moving, discovering and exploring. Appropriate materials and equipment will invite children to come together, to learn and to interact with the physical environment and the people in it.

Appropriate materials and equipment foster many positive learning opportunities.

The effectiveness of kindergarten materials and equipment depends not only upon their careful choice but also upon their use. Too many activities can be overwhelming. Materials that are too complex or too simple will not be used eagerly and appropriately. It is essential that the kindergarten teacher thoughtfully plan the introduction and presentation of materials in relation to the program goals. Equipment and materials in the kindergarten are learning tools, not simply a means of occupying children's time. A list of suggested materials and equipment that support the programming recommended in this volume may be found on pages 55 through 57.

Materials and equipment should be selected on the basis of the criteria listed below.

Safety
- nontoxic finishes
- smooth and rounded edges
- suitability to children's capabilities

Quality and Durability
- able to withstand the wear and tear of a group of children
- able to be maintained to prolong usefulness
- constructed of strong, long-lasting materials
- convenient for storage of all parts

Cost
- initial cost balanced with durability, quality and usefulness
- feasibility of making a good quality substitution for an expensive item
- availability of the item from the least expensive source

Flexibility
- usefulness in a variety of ways and situations
- balance of open-ended materials (sand, blocks, paint, cubes) and specific-use materials (puzzles, books, games, magnets)
- usefulness of all components

Instructional Value
- relationship to educational goals
- careful design to avoid confusing children
- provision of learning opportunities at different levels
- consideration of current, well-founded knowledge about how children learn
- developmental appropriateness

Suggested Materials and Equipment for Kindergarten Programs

Construction

- wooden unit blocks
- large wooden hollow blocks
- wheel toys for riding
- block play props: vehicles, toy animals, people and furniture
- signs
- large empty boxes
- steering wheel
- planks

Discovery materials

- sand table and accessories: sifters, shovels, pails, rakes, molds, funnels, measuring cups
- rice, beans and oatmeal to vary sand play
- Water tub and accessories: plastic tubing, small pitchers, hand pumps, spray bottles, funnels, measuring cups, eye droppers
- collections: rocks, shells, nests, insects
- animal environments and animals
- gardening tools and supplies
- magnets
- color paddles and prisms
- electricity: batteries, wires, bells, flashlight bulbs
- magnifying glasses
- simple machines: pulleys, gears, inclined plane
- thermometers

Woodworking

- workbench
- tools: hammer, saw, clamp, vice, hand drill, screwdrivers, ruler, pliers
- wood, nails, dowels, Styrofoam, logs

Cooking

- electric hotplate and toaster oven, electric frying pan
- measuring cups and spoons
- bowls, utensils, pots and pans
- recipes

Audiovisual equipment

- tape recorder
- record player
- filmstrip projector and filmstrips
- overhead projector, transparancies
- screen

Library corner

- books
- book racks, shelves
- magazines
- chairs, rocking chair, rug
- reading "boat" or "bathtub"

(continued)

Suggested Materials and Equipment
(continued)

Manipulatives

- table top building toys:
  - inch cubes, small colored blocks, Legos, varied plastic building sets
- puzzles
- pegboards and pegs
- parquetry blocks
- lacing boards
- board games

(See also math materials)

Music

- rhythm and musical instruments
- autoharp and/or piano
- melody balls
- records and/or tapes
- scarves

Art supplies and materials

- easels
- tempera paint and brushes
- finger paint
- crayons, water color markers
- large newsprint
- colored construction paper
- colored tissue paper
- cardboard
- scissors
- clay, dough and tools
- paste and glue
- yarn
- collage materials
- burlap and fabric scraps
- wallpaper scraps

Gross motor play

- ladder
- balance beam
- boards
- climbing structures
- slide
- stairs
- floor mats
- wheel toys: pedal toys, wagons, ride-on vehicles
- rocking boats
- scooter board
- jumping board, trampoline
- parachute
- games: ring toss, hopscotch, Twister

Dramatic play

- kitchen appliances:
  - wooden stove, refrigerator, sink, cupboard
- table and chairs
- doll bed, blankets, pillow
- dress-up clothes and uniforms
- dolls and clothes
- broom, dust pan
- ironing board
- telephone, clock, mirror
- dishes, pots and pans, food containers, silverware
- occupational props:
  - cash register and play money, doctor's kit, fire hoses
- typewriter

Language arts materials

- manipulative letters of wood, crepe foam, plastic
- games: lotto, matching, alphabet, initial consonants, etc.
- flannel board, cutouts
- puppets and puppet stage or frame
- books
- pictures
- letter stamps
- typewriter
- alphabet cards
- small chalkboards, chart stand, newsprint
- recordings of stories, earphones

Math manipulatives

- counters: buttons, checkers, beans, etc.
- tools for measuring length, volume, time
- numerals
- unifix cubes
- Cuisenaire rods
- games and puzzles for counting, numeral recognition, etc.
- calendar
- balance scale
- play money
- color tiles
- geoboards, geobands
- pegboards
- attribute blocks
- objects for classifying, sort and ordering: toy animals, buttons, small shape blocks, etc.

Outdoor space. Outdoor space should be an extension of the kindergarten classroom, providing opportunities for exciting learning experiences as children move freely, exercise and develop their motor skills. Outdoor play can also contribute to children's cognitive development, enhance communication and social skills, and give children a sense of independence as well as a positive self-image (David & Wright, 1974; Prescott & David, 1976).

Because educators are realizing the many benefits which come from gross motor play, the equipment and materials designed for outdoor play have undergone several changes in the past decade. One change is the emphasis on developing outdoor areas that take advantage of the beauty of the natural landscape, incorporating hillsides or wooded areas into the play space. Another change is the development of "junk playgrounds," first conceived by C. T. Sorensen, a landscape architect in Denmark (Decker & Decker, 1976).

Innovations in designing and equipping outdoor play spaces can extend the value of outdoor play beyond that offered by traditional playgrounds. Junk playgrounds can include items for:

climbing: ropes, nets and walls
crawling: tunnels, pipes
balancing: logs or barrels
walking and running: stepping stones or tire walks
hopping: log pieces or tires
swinging: tire swings and ropes
sliding: boards or aluminum roofing
stacking and building: plastic pipes or scrap lumber
bouncing: innerspring mattresses or car springs with platforms
water, sand and mud play

Planning and establishing an exciting outdoor play space can be expensive and difficult. However, some companies that sell equipment offer design services to help in developing a total plan. Some schools have created very successful play spaces using industrial materials or recycled items. Sometimes parents have provided the labor and expertise to actually build the play space. Safety standards or guidelines should be followed.

Outdoor play space should feature equipment and accommodations for large motor activities, sand play, water play, dramatic play, ball play, active play, gardening and quiet activities. A separate kindergarten play area, immediately outside the classroom and safely enclosed, allows for activities to flow easily between indoors and outdoors.

When planning an outdoor play space, the following considerations should be kept in mind:

Safety and health

- ☐ Equipment is strongly constructed, securely anchored and well maintained.
- ☐ Cushioning, at least one foot deep, is located under climbing and swinging equipment.
- ☐ Swing seats are made of pliable material and are separated from areas used for running.
- ☐ Protective railings are installed to prevent falls from high equipment.
- ☐ The play area is enclosed with fencing.
- ☐ Good drainage keeps surfaces usable.
- ☐ A drinking fountain is available.
- ☐ Both sunny and shaded areas are available.
- ☐ Children are guided to use equipment appropriately and are taught basic safety rules.
- ☐ Teachers are actively involved in supervising all areas of the play space.

Activities and equipment

- ☐ Equipment provides appropriate and challenging levels of difficulty.
- ☐ A variety of equipment is provided to stimulate different types of physical activity.
- ☐ Some activities invite cooperative play.
- ☐ Some equipment is flexible and movable so that children can arrange it to suit the demands of play.
- ☐ The placement of equipment demonstrates a variety of spatial relationships.
- ☐ There are enough play options to avoid an unreasonable degree of competition or waiting.
- ☐ Both hard surfaces and grassy areas are included.
- ☐ Open space for active play is available.

Organization of play space

- ☐ The play area is well defined.
- ☐ Clear pathways and adequate space allow traffic to flow well.
- ☐ Children are easily visible for supervision by staff.
- ☐ Different types of activity areas are separated.
- ☐ The area is easily accessible to classrooms, bathrooms and storage.
- ☐ The daily schedule includes active play periods outdoors.
- ☐ Use of the play space is scheduled to minimize overcrowding.
- ☐ Teachers focus their attention on and interact with the children to enhance learning outdoors.

Library media resources. Instructional technology—library media resources and computers—offers tools and delivery systems for learning and teaching which are part of the learning environment. Library media centers and the personnel who staff them can play an important role in children's educational lives as soon as children enter school.

A well-developed library media center contains many types of materials and equipment in a multipurpose facility overseen by appropriately trained staff. Materials which reflect the school's educational programs and children's recreational interests may include the following types:

print	books, periodicals, newspapers and pamphlets
visual	computer, hard- and software, filmstrips, films, games, slides, transparencies, videodisk, videotape, etc.
audio	audio card, cassette tape, instructional radio and television, records, reel-to-reel tapes
mixed media	art objects, dioramas, games, globes, maps, models, pictures and prints, puzzles, replicas, sculptures, toys

Sometimes children may use the materials which are appropriate to them in the library media center, individually or in group activities. At other times, the library media specialist may bring items to the classroom.

Daily story time, whether with the kindergarten teacher or with the library media specialist, is one of the highlights of a high quality kindergarten program. Children are captivated by the magic worlds they enter through literature. They are not too young to experience the many treasures of good literature and to learn that books are sources of pleasure, excitement and delight. Kindergarten students love repetition, eagerly requesting that "old favorites" be read again and again! Broadening children's language experiences through literature, poetry and storytelling forms a rich background for learning to read and loving it. The place of literature as an important contribution of library media cannot be overlooked as a part of the total language arts experience.

Concept books help to expand language by providing materials that refine and elaborate on the concepts that children are learning. Wordless books are favorites of young children because they allow those who do not yet read to tell stories through pictures. Using poetry, giving children opportunities to tell and retell stories with flannel board cutouts, and seeing puppets make stories come alive allow the media specialist to share in children's language and reading experiences.

Many library media skills can be learned by kindergarten children. The Connecticut State Department of Education's publication, *A Guide to School Library Media Programs*, defines four competency areas and the skills which kindergartners can master. The areas are (1) knowledge of library media center organization, facilities, personnel and procedures; (2) selection and use of appropriate materials for curricular or leisure activities; (3) skill in analyzing, interpreting, organizing and evaluating information; and (4) skill in communication, including the production of oral, written and visual materials. An important objective of the library media program is to provide materials and services that support teaching and learning. Meeting this objective requires teachers and library media specialists to work together. Teachers need to keep the library media specialist informed about classroom activities and teaching plans. Conversely, library media specialists should keep classroom teachers up-to-date about the materials, equipment and services available from the library media center. Children benefit from the integration of programs and come to understand the library media center as a valuable part of their learning environment.

In the Minnesota Department of Education's publication, *Kindergarten*

Excellence: Knowledge and Competencies of Kindergarten Teachers (1986), it is suggested that teachers can facilitate the use of media and technology by gaining skills in using film, filmstrip, slide, overhead and opaque projectors; videotape and cassette recorders; record players and reproduction machines; microcomputers, laminators, dry mount press; and television.

The learning environment will be enhanced by a teacher's familiarity and use of: (1) bulletin boards (which display, teach, reinforce, introduce and review); (2) pictures and posters; (3) letters and lettering; (4) boards (flannel, magnetic, hook and pocket); (5) puppets (commercial, teacher- or child-made); (6) games, film, filmstrips, slides, photographs, newspapers, and magazines, models, software, books, videotapes and records.

A variety of children's activities will be enriched if the teacher also provides and understands viewing skills and the need for a variety of viewing opportunities by children. "Viewing is a receptive, communications art. Seeing is a physical ability; viewing is a learned skill. Viewing has a variety of purposes (marginal, discriminative, attentive, appreciative, analytical and creative)." *(Kindergarten Excellence: Knowledge and Competencies of Kindergarten Teachers*, a report of the Minnesota Early Childhood Teacher Educators, Kindergarten Task Force, 1986, p. 125).

The role of the teacher, also described in the task force report, should include helping children to appropriately use and respond to media and technology by: (1) teaching children how to use and produce selected media equipment and items; (2) including children in the creation of bulletin boards and other displays for the classroom; (3) helping children understand media as a means of communication; (4) giving children a variety of viewing/listening experiences; and (5) helping children to analyze and evaluate media use and effectiveness. (Ibid.)

Computers as a part of the learning environment. Microcomputers and related technology are becoming increasingly available to schools. These materials represent potentially powerful tools for the kindergarten curriculum, but like other resources, careful planning and exploration must precede their infusion into the classroom. "...Children are growing up interacting with computers, playing with computers and learning to be comfortable with computers without even realizing it." (Naisbitt, 1982, p. 33)

Early childhood educators will argue that it is important for young children to build with blocks, engage in dramatic play and experiment with finger paints, etc., but that the microcomputer can be used, also, as an educational experience and tool to stimulate divergent thinking, freedom and self-confidence. Case studies also indicate that the microcomputer can promote autonomy, self-esteem and cooperation (Burg, 1985).

Microcomputers can provide children with developmentally appropriate experiences.

Burg has stated that while microcomputers will never replace blocks or dolls or trucks or crayons, they can provide children with developmentally appropriate experiences. Most five-year-olds can play games on the microcomputer that provide opportunities to compare numbers, letters, words, shapes, colors, sounds, amounts and other concepts. The microcomputer can help children count, add and subtract objects. Other games, she says, can ask them to remember what they've just seen or heard. The microcomputer can also encourage problem solving and direct the manipulation of concrete objects (Burg, 1985).

Some computer programs such as Cooperation Maze by Follett Library Book Company have been created to permit children to cooperate as they work together on a microcomputer task. Using the LOGO programming language, children are introduced to conceptualizing and hypothesizing. Children can demonstrate creativity and persistence when using LOGO. The primary drawback associated with computers is that, too often, current educational uses of the computer "put children through their paces to provide exercises of an appropriate level of difficulty, to provide feed-

back, and to dispense information. The computer is programming the child. In the LOGO environment, the relationship is reversed. The child, even at preschool age, is in control. The child programs the computer." (Papert, 1980, p. 19).

Fine motor experiences can be provided by using the keyboard and joysticks. Language skills can be developed by taping and playing back stories. Sight vocabulary can be learned by repeated use of basic command words. Auditory skills can be enhanced by identifying and playing tunes on the computer. There is a danger, however, that some educators will also expect young children to be able to develop simple programs, and that should not be a goal of the program. Teachers may need training in order to learn basic programming skills so they can individualize programs for children or choose appropriate software for them (Burg, 1985).

Kindergarten children can explore and experiment. Most children can also define the term "computer"; recognize, understand and use computer terms appropriately (i.e., computer, hardware, keyboard, disk drive, printer, software, diskette, boot, cursor, menu); follow oral and written directions; turn computer system on and off; locate keys on keyboard; run a simple software program; and use software for drill and practice, simulation/modeling and for tutoring purposes. (ACES, 1983).

For young children, computers can serve the following three major functions:

- ☐ **Delivery of individualized instruction**
  Using appropriate computer hardware and software, kindergarten teachers can plan instructional activities in which the rate of response, level of difficulty, mode of learning, type of feedback and amount of practice can be varied according to child needs.
- ☐ **Provision of specialized activities**
  Computer technology can permit teachers to provide some special activities that would be difficult or impossible for children to experience otherwise. Among the characteristics of the computer is its potential to provide a positive learning environment. Many peripherals, or attachments, are now available for the microcomputer which enable children to develop and use problem-solving and creative thinking skills. Graphics tools such as the Koala pad and the Gibson light pen, and music utilities such as the Music Construction Set encourage children to explore and test ideas that would be hard to duplicate with other methods. Also, computer-controlled robots can provide concrete, nonthreatening and highly motivational learning experiences for young children. For example, a LOGO-driven floor turtle can help children experience the joy of success in problem solving as well as the excitement of being in control of their learning.
- ☐ **Compensation for disabilities**
  In working with special needs children, the value of individualized instruction, immediate feedback and positive learning environment which can be supported by computers cannot be overemphasized. Computers, also, can help children to overcome or compensate for handicaps involving control and/or communication disorders. Speech synthesizers, speech recognition units and keyboard enhancers and emulators can dramatically improve special needs children's ability to learn by enabling the computer to "read" for print handicapped, "write" for paralyzed or mobility-impaired, "speak" for vocally handicapped, and "move" for physically disabled children.

Teachers can obtain information about software products from consultants with the State Department of Education, from catalogs distributed

by software companies, and by perusing educational computer journals such as Electronic Learning and Classroom Computer News. Various teacher-oriented newsletters such as Microquests, Hands On! and the National Logo Exchange offer concrete suggestions for classroom activities. In addition, in Connecticut, microcomputers and a range of educational software are available for investigation by teachers at SERC (Special Education Resource Center), Connecticut's regional educational service centers (ACES, CES, CREC, EASTCONN, Project LEARN and RESCUE), Project Rise and the computer centers at colleges and universities.

In conclusion, kindergarten children are highly motivated and show obvious enjoyment in actively engaging a powerful machine with a sense of control and competence when they use microcomputers. While a microcomputer's monitor looks like a television screen, it does not function like a television set. In contrast to passive children watching television, they actively manipulate what appears on the screen. Children often do so in pairs or small groups as they share ideas about what to do next (Ziajka, 1983).

"All educational tools are value-neutral. They can be used to promote divergent thinking or conformity, freedom or restriction, self-confidence or fear. Choosing how an educational tool will be used is the responsibility of teachers. Such choices require knowledge." (Burg, 1985, p. 44)

In the final analysis, a microcomputer can be viewed as "simply another curriculum material whose value is dependent on how it is used by kindergarten teachers. Computers will never replace teachers, nor will they take the place of those activities used for music, language arts, cooking, art, science and the rest. A microcomputer is merely another potential addition to the early childhood classroom, another opportunity for young children to experience the surrounding world." (Ziajka, 1983, p. 66)

Implications. The suggestions for the arrangement of the learning environment outlined in this chapter are meant to be guidelines for the kindergarten planner. As stated earlier, the teacher must constantly be aware of the original program goals in order to create and sustain an environment in which all children in the program can learn and grow. The sections on space and materials serve as a reminder of the ways in which the environment in a kindergarten program is central to the children's needs. When we speak of environment, we include not only the physical arrangement of space and learning materials in the classroom and on the playground, but also the total impact on the child of all people and activities within the school building and the larger community.

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Emotional and Social Development 4

Emotional and Social Development 4

As the child's first formal year in public school, kindergarten is the natural time to encourage an ability to function within a group. Perhaps the most important prerequisites to smooth group functioning are the development of self-knowledge and self-confidence, signposts of emotional development. Emotional development, in turn, leads to the ability to communicate with others, to recognize and respect differences in others and to adapt to both routine and change. These are often indicators of social adjustment. Although it is recognized that these qualities are interrelated, they are arbitrarily separated here for purposes of discussion. The overall goal in both emotional and social development is to foster a child's individuality and a strong sense of self-understanding, which leads to autonomy.

This section discusses goals and relevant research, and offers examples and recommendations for nurturing emotional and social development in each of the following areas: positive self-concept, communicating with others, recognizing and respecting differences in others and working toward autonomy or self-discipline. The sources of stress on children and how to alleviate the effects are discussed in some detail.

Emotional development

> "If facts are the seeds that grow into knowledge, then emotions and sense impressions must be the fertile soil in which the seeds must grow."
> Carson, 1965, p. 65.

The importance of self-concept. Everything children think and do is guided in part by how and what they think about themselves, that is, by their sense of self (self-concept, self-worth and self-esteem). Weinstein and Fantini (1970) suggest that the three areas that humans think about most are identity, connectedness and power. Identity means: Who am I? What do I do? Why? Connectedness means: Who are my significant others? How do I relate to them? And power means my sense of control: I am responsible for what happens to me.

Humans are not born with a sense of self; rather, they learn it by interpreting events around them. If parents and teachers treat children as capable learners, children try harder, do well in school, receive recognition and become scholars. Sadly, the reverse is also true, as Rist's research (1973) poignantly asserts. Echoing the well-known findings of the earlier Pygmalion studies (Rosenthal and Jacobson, 1968), Rist's subjects evolved as winners or losers depending on how they had been labeled in kindergarten. This indicates that the kindergarten teacher is an important builder of children's positive self-concept.

Three implications emerge from these findings. First, a positive self-concept is preferable to a negative one. Second, the child's self-concept is malleable. Third, the kindergarten classroom is an ideal laboratory for building positive feelings of worth.

Raising children's self–concepts. All children benefit from a healthy, positive self-concept, but some children may require specific help:

- ☐ if they make frequent negative comments about themselves and/or others;
- ☐ if they avoid or are avoided by peers;
- ☐ if they continually seek reassurance or attention (the showoff, bully, complainer, tattletale); and
- ☐ if they set unreasonable goals (too high or too low).

Activities to Build Self-Concept

If the kindergarten classroom has basic supplies such as puppets, a mirror, individual student mailboxes, tape recorder, camera, magnifying glass or microscope, and various art supplies for drawing, painting and modeling, the following activities may be helpful:

Group activities

- ☐ Discuss any classroom or life problem with the group, brainstorming to arrive at a variety of solutions.
- ☐ Form "positive bombardment circles." One child sits in the center while class members in a circle take turns saying something complimentary about him/her.
- ☐ Do a classroom project together: newspaper, birthday list, trips.
- ☐ Play "me-in-a-box." Each child brings in items that represent him/her.
- ☐ Play "If I could be a _____ (toy, food, animal, person, place, plant) I'd be a _____."

Role-Playing topics

- ☐ Children's joys and delights (birthday, holiday, vacation, food)
- ☐ Children's problems (school, home, family)
- ☐ Scenes from children's literature

Language experiences, activities and topics

- ☐ Class timelines. Enter each child's birthdate, as well as other significant events (moves, new siblings, illnesses, deaths, divorce)
- ☐ Class book, such as "Happiness is...," "Sadness is...," "Kindness is.."
- ☐ Self-commercials, in which children "sell themselves" as potential friends
- ☐ "Me" poems, rhymes or riddles accompanied by "me" tracings or drawings
- ☐ Ideas for class "suggestion box"
- ☐ Sentences to be completed: "I like to _____." People like me because _____." "Someday I will _____."
- ☐ Class and individual notes and letters (thanks, invitations, requests, get well) written with teacher's help on newsprint or posterboard.

The kindergarten teacher wants every child to develop insights such as the following (even though five-year-olds would not verbalize them as stated here):

- ☐ We all deserve to be happy.
- ☐ What I do affects myself and others.
- ☐ I should treat others the way I want to be treated.
- ☐ People behave out of their needs and feelings.
- ☐ Each of us can learn how to avoid trouble.
- ☐ Each of us can unlearn bad habits.
- ☐ My teacher cares about me.
- ☐ I need to be able to cope when bad things, although not my fault, happen to me.
- ☐ Each one of us has strengths and weaknesses; I am beginning to learn about mine.
- ☐ Each one of us has likes and dislikes; I am beginning to learn about mine.
- ☐ Each of us can do some little things to make the world a better place.
- ☐ I can learn to express myself orally, nonverbally and in writing to let others know what I am thinking and feeling.

Social development

Social development occurs when young children interact with objects and important people in their environment. Teachers in kindergarten aim to foster three basic social skills: effective verbal and nonverbal communication, recognition and respect for individual differences, and self-discipline leading to autonomy.

A range of social development will be reflected in the kindergarten class.

Rudolph and Cohen suggest that in any kindergarten class one would expect to find children in several stages of social development. These range from those who can usually manage only one friend at a time to those who prefer cooperative activities in larger groups. Depending on the demands of the situation, the sensitive teacher will vary group sizes to try to accommodate as many styles as possible. The observant teacher will also note children who have yet to find an acceptable niche in the class and will guide them into strategies to foster better social interaction.

Rudolph and Cohen conclude that "in time, identification with the class as a whole gives a child the assuring comfort that feelings are universal, and with that the special sense of power that comes from being one of many who are tied in common interests." (Rudolph and Cohen, 1984, p. 41)

Effective communication. Because communication is a basic strategy for social interaction, it is important for children to develop listening and speaking skills. The strategy of communication is a good example of the integration of various kinds of learnings in kindergarten curriculum. For specific activities that foster communication skills, the reader is directed to the section on the language arts in Part II of the kindergarten guide.

Recognition and respect for individual differences. People differ in age, appearance, race, sex, ethnicity and occupation. Children need to be exposed to as many different examples as possible in order to avoid forming stereotypes. Our overall goal is for children to celebrate differences as they learn to value the contributions of all members of our society. Teachers may find the checklist on page 70 to be helpful in judging how well they are communicating this acceptance of societal differences to children through the total classroom environment.

Establishing and Maintaining A Nonsexist, Multicultural Classroom Environment

A Checklist for Teachers

1. Does your classroom contain pictures of members of many cultural groups of both sexes in varied occupations and professions: doctors, letter carriers, nurses, lawyers, technical workers, mechanics, teachers, scientists?
2. Do you regularly display pictures of men and women, girls and boys in nonstereotypical roles?
3. Do you regularly display pictures of men in nurturing roles?
4. Are children made aware that there are many different types of families, that families "change in size and composition"? Are they made aware that all forms of the family are valid?
5. Does your classroom environment promote nonsexist education, e.g., combine the housekeeping and block areas, or are pupil tasks and activities sex-based?
6. Do you avoid the use of sexist terms such as mailman, fireman, policeman, brave boy, sweet girl, etc.?
7. Do you avoid suggesting that certain types of content, behavior, achievement, reward and punishment are more appropriate for boys than girls? for girls than boys?
8. Do you regularly display pictures of heroes of various cultural groups?
9. Does your class library contain materials dealing with the life, history and culture of various cultural groups?
10. Have the materials, books and nonprint materials in use in your classroom been selected in accordance with established guidelines for evaluating books for racist and sexist content?
11. Do you take into account cultural differences and differences in learning styles when planning teaching-learning activities?
12. Do you regularly plan activities that will help each student to develop a more positive self-concept?
13. Are activities—arts, crafts, music, literature, games—that will help students to recognize, accept and appreciate cultural differences a regular part of the classroom program?
14. Do you avoid the use of such expressions as "You're acting like a bunch of wild Indians! You're acting like a bunch of savages! Boys should be gentlemen! Girls should behave likes ladies!"?
15. Do you show affection and/or displeasure equally between the sexes? Among cultural groups?
16. When bias or discrimination occurs in the classroom, do you encourage discussion, understanding and resolution of the problem?
17. Do you avoid the use of terms that associate the term "black" with negative images, e.g., black day, black deed?
18. Do you accept the speech and language of the culturally different child? Are you able to develop the child's ability to use standard English without making it appear that the child's own dialect is being rejected or is in any way inferior?
19. Do you encourage nonstereotypical activities and model such behavior yourself?

(Adapted from Beryl Banfield, *Black Focus on Multicultural Education*, 1980)

Children's books. Children's books should be inspected for racism and sexism. The Council on Interracial Books for Children suggests the following guidelines to use in selecting and evaluating children's books:

- ☐ **Check the illustrations.** Choose books that show neither stereotyping or tokenism.
- ☐ **Check the story line.** Select books that contain positive female role models, equitable standards for success and cooperation among diverse groups.
- ☐ **Look at the lifestyles.** Insist on books that illustrate respect for minority groups and that are accurate in cultural details.
- ☐ **Weigh the relationships portrayed between people.** Seek books that show nonwhite and female characters as protagonists as well as in supporting roles.
- ☐ **Note the heroes.** Minority figures should be viewed within the context of the whole society, not simply in terms of how they benefit white society.
- ☐ **Consider the book's effects on a child's self-image.** Be careful of such stereotypes as "white, young, clean" as symbols of good as opposed to "black, old, dirty" as symbols of evil.
- ☐ **Evaluate the author's and/or illustrator's background.** To see if they are ultimately qualified to write the book.
- ☐ **Examine critically the author's perspective.** To insure objectivity in values.
- ☐ **Watch out for loaded words.** Insist on adjectives that convey positive rather than negative images, such as wily, docile, inscrutable and savage. Especially look for nonsexist language, e.g., ancestors instead of forefathers, community instead of brotherhood, firefighter instead of fireman.
- ☐ **Look at the copyright date.** In general, books printed after 1970 show greater sensitivity to avoiding racist and sexist references.

(Council on Interracial Books for Children, 1974)

At the end of this chapter, there is a list of books that can help foster healthy social and emotional development.

Fostering self-discipline

The word "discipline" comes from disciple—a follower, a learner. Adults help children learn appropriate behaviors by setting good examples and by maintaining consistency and firmness. The effective teacher helps children to gain control over their behavior, or, in other words, to learn self-discipline. Self-discipline is crucial to healthy emotional and social development, because it permits children to use their talents in productive and creative ways. Children must be offered the freedom to test their own limits, to make decisions and to govern their own actions. At the same time they are learning to do these things, children also need adult protection to keep them from harmful mistakes. But this is one of the challenges of kindergarten teaching—communicating responsibility and trust so that the children can begin to handle freedom.

Many people confuse discipline and punishment. There is a difference between the two, as the following table from Gordon and Browne (1985, p. 161) points out.

Discipline	Punishment
Emphasizes what the child should do	Emphasizes what the child should *not* do
Is an ongoing process	Is a one-time occurrence
Sets an example to follow	Insists on obedience
Leads to self-control	Undermines independence
Helps children change	Is an adult release
Is positive	Is negative
Accepts the child's need to assert self	Forces the child to behave
Foster's child's ability to think	Thinks *for* the child

Teachers foster discipline by modeling appropriate behavior.

What does good classroom discipline look like? In a classroom where good discipline is evident, children behave courteously, accept responsibility for their own actions, lead and/or follow as necessary, use materials appropriately and adapt to daily routines. The teacher is a role model and facilitator, who

- ☐ kneels down, talks directly to children who need help, looks directly into their eyes, reaches out and holds a hand or shoulder while communicating calm concern and understanding;
- ☐ shows guidance through voice and body language appropriate to individual children. Some children respond to a look, others to a silent gesture, still others to a soft voice and others to a firmer tone. Most children want to do well and need only to be given some constructive guidance.
- ☐ displays a sense of humor;
- ☐ responds as positively as possible to each situation that arises, always acknowledging children's feelings in such ways as:

"I'd like to see you finish that puzzle instead of dumping it on the floor. Here, let's pick up the pieces and study their shapes. Maybe we can figure out how to do it."

"Please don't yell across the room to your friends. Walk over to them and speak to them."

"Your ideas are interesting and I like to talk with you; however, the children want to hear the rest of the story. Tell me at the end of the book what you want to say. I promise to listen to you then."

"Some children like to draw designs with lines and curves, Laurie. Other people like to draw people and houses. Each kind of drawing is good and important."

"Ask her. Don't grab it from her. People don't like grabbing. Ask, and then listen to her answer. Did she say 'no' to you? Then let's go find something else for you. I'll go with you."

"Water on the floor is too slippery. Someone could fall and get hurt. Here's a mop. See if you can mop up all the water over there. . .I'll sponge up over here. Next time pour carefully and stop before you get to the top. You can do it."

(Examples adapted from Jeannette W. Galambos, *A Guide to Discipline*. National Association for the Education of Young Children, 1969.)

Setting classroom conditions for effective discipline. Chapters 3 and 5 discuss the appropriate arrangement of classroom space and materials to facilitate learning and development. It should also be noted that overcrowded play and work areas tend to create conditions that make positive interactions more difficult. Arranging sufficient materials, equipment, space and time, as suggested earlier, will also help to support a good social climate and promote effective self-discipline.

Misbehavior will result if the activities and teacher expectations are too demanding, too easy, too irrelevant or too formal. If children must sit or stand for very long periods, if children are not permitted to talk or move around the room, and if they don't have enough time to do the things they want to do, problems will occur.

The teacher will need to get to the classroom before the children do to plan the day's activities and to arrange the activity centers accordingly. The teacher can also be there to greet children as they come in. The first few moments of the session set the emotional tone for the entire day, so it is important at that time to be especially relaxed, warm, positive and enthusiastic. These qualities bring out the best in children.

Discipline and development in the kindergarten. Several writers, most notably Piaget (1932), Kohlberg (1976) and Damon (1979), conclude that children's moral reasoning develops in a regular and predictable age-related continuum during early and middle childhood. Briefly, the child moves from concern for external, concrete consequences to concern for meeting external social expectations. Put another way, the child moves from simple, egocentric reasoning to notions of reciprocity and respect for order and direction. The kindergarten year is one in which the child develops finer shades and gradations of feelings as well as responses to stimuli; therefore, it is an appropriate time to work with children to build a sense of self-control. The desired result for each child is autonomy and self-governance as opposed to blind obedience to others. Autonomy develops when children are exposed to different points of view. Children should hear how others respond to their misbehaving, for example, so that the next time they can make better behavioral choices. It has been shown that severe punishment leads children to thoughtless conformity, or worse, revolt against conformity. Children bring strong feelings and behavior patterns with them to kindergarten. Teachers need to recognize and respond to their expressions of anger, fear, jealousy, humor, lack of affection and grief as well as to their expressions of joy and happiness. Keeping in mind the general principles outlined in this chapter and those learned from training and experience in early childhood education, teachers can develop a style of classroom guidance that promotes the growth of each child in self-control and autonomy.

Autonomy develops when children are exposed to different points of view.

Relationship of social-emotional development to the social studies

A major goal of early childhood education is to help young children to grow beyond considerations of themselves only, toward a concern for the welfare of others, and a knowledge of their social world. Before one can understand and value others, one must come to understand oneself. Thus, a child's social-emotional development is a key factor in any early childhood program. This foundation becomes basic to the child's learnings in the social sciences. (For ideas on expanding the child's knowledge of the world and of the self, see the section on social studies in Part II of the guide.)

Stress on kindergarten children

Related to the social and emotional development of children is the issue of stress. In recent years, sources of potential stress have been increasing. When children are affected by stress, schools are affected. Some sources of stress and some suggestions of appropriate ways for teachers and schools to handle stresses on children are offered here.

Family patterns may cause or contribute to childhood stress.

Changing structures of American family life. Changes in family life structure and functioning can be sources of stress for young children. The family of two parents—one who works outside the home and one whose primary vocation is child care—is no longer typical in the United States. An increasing number of Connecticut children do not live with a parent at all. In our state, each month an average of 2,054 children (two percent of all children under 18) are in foster care. In 1985, 9.2 percent of all babies (more than 4,000) were born to teenage mothers, many of whom rely upon the child's aunt or grandmother for the child's primary care.

Six and one-half million children in the United States live in stepfamilies, or "blended families," usually formed through divorce and remarriage. By 1990, as many as one of every four children may live in a single-parent household (double the 1970 rate). In 1985, one child in five in Connecticut was born to an unwed mother, many of whom were teenagers. The divorce rate, which is linked to many single-parent households, was 18.7 percent in 1980, nearly double that of 1970. Connecticut divorces in 1980 affected 13,790 children (two percent of all children under 18). In 1985, the number of children under 18 who were affected by divorce dipped below two percent to 9,695.

Clearly, family life conditions such as these can place stress on parent and child. Some research on stepfamilies suggests that children in these households experience more stress and ambivalence, and less unity, than those in natural parent homes, especially in the first year or two of adjustment. Children in stepfamilies report more feelings of rejection, and some research cites these children as more prone to negativism and aggression (Skeen, 1984). Families of children born out of wedlock face enormous financial and emotional burdens. Lower achievement and increased absenteeism in school are documented results of divorce on children (Winn, 1983).

Employment patterns. Employment patterns of family members are changing, with the two-earner family becoming typical. By 1990, a projected 50 percent or more of married women with children under six will work outside the home. Although research on the specific effects of working mothers is inconclusive (Honig, 1986), many factors stemming from the two-earner or working single-parent family's situation affect kindergarten children.

The trend for more mothers to work has led to increased numbers of children in day care or at-home-alone (latchkey) children. When mothers work, children may spend time in one or more day care settings before and/or after school. In Connecticut, the percentage of women (with children under 18) in the workforce increased from 41.2 percent in 1970 to 56.5 percent in 1980. State statistics also reveal that, in 1986, the need for day care placement exceeded the actual number of licensed spaces by nearly 25,000. In addition, it was estimated that 185,000 Connecticut children age 6 to 12 were in need of before- and/or after-school day care. Nationally, millions of children are left alone after 3 p.m. each day. While some can manage on their own, too many face frightening, lonely or dangerous periods alone during the school year, on school holidays and summer vacations. While the number of working mothers is increasing, the availability of suitable day care has become more scarce and costs too prohibitive for most families. Too few of the nation's public school districts

provide before- and after-school programs. Many parents have few options but to leave their children alone for some part of the day.

In addition, two-worker and single-parent families often have little time to assist in the child's education by taking the child to the library, expanding on the child's interests at home, and attending school conferences and events. By the time parents return home at the end of the day, the child's excitement with his school and interest in talking about school events usually has waned.

Poverty. In Connecticut, 11.4 percent of all children lived in poverty in 1980. Of these, 15.3 percent were children under age three. Increased employment and larger numbers of single-parent families headed by women have contributed to the spread of poverty. In Connecticut, where the number of households headed by a woman doubled between 1970 and 1980, children in these families are reported to be four times as likely to live in poverty than other children. Many of these families experience feelings of helplessness, futility and injustice as they struggle for economic survival in the face of unemployment and low income. Tension in the home is felt by children if they hear money discussions and arguments.

Lack of sufficient health care may lead to stress on children. The school nurse can provide a primary connection with health care. Lack of adequate nutrition and nutritional information may also exist.

Shame and embarrassment at inadequate clothing, school supplies, free or reduced-price lunches may affect some children. Even at kindergarten age, some children notice differences in financial status.

Indirect results of poverty—inadequate housing, unsafe play areas, drug pushers in apartment hallways, frightening incidents on the way to and from school—can all be sources of stress.

Child abuse, discipline and parental expectations. When children experience acceptance and respect for their needs, when they are given appropriate, well-enforced limits for their behavior and empathetic role-models, they learn to like themselves and others. When these elements are absent, children may devalue themselves and feel hostile toward others.

Extreme conditions of parental frustration, tension and depression can lead to child abuse. Child abuse and neglect not only endanger the child's physical well-being, they also jeopardize healthy social-emotional growth. Nationwide, reported cases of child abuse increase dramatically each year. Unfortunately, similar trends are prevalent in Connecticut.

Unrealistic parental expectations about children's ability to discuss behavior objectively, to reason and to internalize right and wrong, can strip children of childhood. Too many children are asked to assume control, but they do not have the resources to deal with such power. Children need to romp and play and explore, relying on parents to provide limits. Too often, they are expected to be alert and cautious. Absence of clear limits and authoritative—not authoritarian—adults makes children fearful. Their world is not safe and predictable and they become disoriented and lost in a world that doesn't make sense.

Parents under stress tend to share problems with children who then become confused and threatened. Children need adults to care for them. They cannot understand violence, death, sexual fulfillment, depleting natural resources or nuclear threat (Winn, 1983). Children who are forced to listen to these problems become confused and threatened. They feel responsible and guilty for the adult's pain.

Societal stress and expectations. Some educators and parents believe that today's kindergartners are more sophisticated and knowledgeable than children of prior decades. Today, one of every two children who enters kindergarten has been to some kind of early childhood program, and an increasing number of preschools use an academically oriented curriculum.

During these early childhood years, children are also exposed to pre-academic concepts through children's television. Even before enrolling their children in a nursery school, some parents enroll their children in formal learning programs. To some parents and educators, the logical conclusion is that these children's background experiences mean they need an academically enriched kindergarten curriculum.

Some school administrators feel pressured by parents and school boards to produce better "products," as measured by standardized test scores, and have responded by beginning to teach basic skills earlier and earlier. These educators often favor academic kindergarten programs, and especially an emphasis on early reading. What these groups of well-intentioned parents and educators are forgetting is that, while kindergartners may appear to be more mature, they are still five-year-olds. "If the pressures for early achievement have changed and intensified, the way that four- and five-year-old childen grow and learn has not. There is no way to speed up the way they grow, develop and learn." (Seefeldt, Carol, 1985, p. 13)

Television, books and films portray children as more adult than they are, another of society's pressures on children to grow up fast. Children are dressed like mini-adults and expected to act much older than they are, whether they are interacting with people or playing with toys. Status-conscious parents have added pressures on children by having to fulfill their own needs about being good parents—sending their children to the "right" preschool, dressing their children in the most fashionable clothes, etc. Television has brought accounts of global war, terrorist events and the threat of nuclear war into the lives of children, creating different kinds of society-produced stress.

Family events as stressors. For some children, the birth of a baby into the family can be stressful. More serious events, such as the death of a sibling, parent or grandparent, can also cause severe stress.

How children react

A child may react to stress in a variety of ways:

- ☐ daydreams frequently;
- ☐ lacks ability to concentrate according to current developmental level;
- ☐ is overly sensitive to mild criticism;
- ☐ shows developmental delays, regression: pants wetting, bottle sucking, etc.;
- ☐ withdraws from relationships with others;
- ☐ is hyperactive or restless, wanders around room, touches and disturbs toys, games and other children;
- ☐ refuses to participate in family-oriented activities;
- ☐ sleeps in school; is regularly tardy or excessively absent;
- ☐ is highly demanding of adults;
- ☐ has nightmares; and
- ☐ has grave, solemn face; rarely smiles or laughs.

Ways to help children under stress

There are numerous appropriate ways for teachers and schools to help children deal with social and family pressures.

From society's demands

- ☐ Do not expect more of children than they can deliver at their developmental level. Encourage parents and school boards to decrease unrealistic demands. Use public information vehicles—newspapers, school meetings and guest lectures—to inform the community about what children can and cannot do.
- ☐ In the classroom, encourage children to attempt activities in which they will succeed.

From family changes

- ☐ Some Connecticut schools, overwhelmed by the sheer number of children whose parents have divorced and remarried, no longer feel they can deal with such situations as anomalies. They have been experimenting with special groups for parents and children, conducted by town social workers and school guidance counselors.
- ☐ Refer particularly difficult problems to school guidance counselors or social workers and be a resource for information and referral when parents ask for help.
- ☐ Be aware of children's current family situation and develop close family-school linkages so that parents will feel free to communicate with the school.
- ☐ Accept the different family patterns represented in the classroom—children without father or mother or in stepfamilies. Mention casually during the course of any family-oriented activity that "some of us will want to make two Mother's Day cards, one for mother and one for stepmother;" "some children like to celebrate Father's Day by making a gift for a special grownup in their lives, like grandfather, uncle or friend;" or "when you draw a picture of your family, you may want to include some special people whom you see often, like a grandmother, stepfather, or cousin who lives downstairs."
- ☐ Examine your own attitudes and prejudices about families. Do you expect a child to misbehave merely because she/he is from a "broken home," or do you look at the whole child and accept other explanations for behavior also? Do you see stepmother as "wicked" or as incapable of providing the same caring and nurturing as a natural mother? Do you think that the boy from a stepfamily is reacting to bad parenting or could he just be reacting to the birth of a new sibling? Do you listen to the concern that parents share about their children's adjustment to a new family situation, or do you prejudge them? Do you overanalyze children's drawings, behavior?

From working parents

Many educators are also working parents who understand the need to protect precious family time. Some ways to accommodate the needs of the school's staff and the children's parents are:

- ☐ Schedule only a few, highly prized events each year.
- ☐ Take turns with another teacher covering lunch breaks so that teachers can meet with parents during the noon hour.
- ☐ Don't insist that parents come in person unless necessary. Use the telephone.
- ☐ Arrange and announce in advance some school booster activities in which working parents can participate: room parent, donation of "found" materials, playground building projects on weekends.

From child abuse and neglect

- ☐ Become familiar with the state law and signs of abuse. Learn what the appropriate actions are to fulfill the teacher's responsibility in the particular school system in which you work. In general, teachers are expected to report their concerns to an administrator and then to work cooperatively with the responsible parties to secure necessary protection for the child. Continue to support the child's family relationship, never undermining the parent-child bond.
- ☐ Enlist the help of the school staff—teachers, nurses, social workers, guidance counselors, special education personnel—as a team to decide what a child's behavior means.
- ☐ Consider the possibility of providing a child-care program within the school for before- and after-school care, or arranging with a child-care center to address these parental needs.

Ways to help children under stress
(continued)

From poverty

Educators are not responsible for society's conditions but they should not feel absolutely helpless.

- ☐ Find out about agencies that supply shelter, food, clothing. If you choose to, volunteer and advocate for these agencies.
- ☐ Find effective ways to be sure that children in temporary crisis or chronic poverty get what they need without shame. Get families and local groups to donate clothing—jackets, boots, mittens—and books. Distribute in a tactful manner, such as through the school nurse rather than in front of other children.
- ☐ Be sure parents and children fill out all forms, such as reduced-price lunch forms, and that all forms are returned.
- ☐ Take advantage of community or government programs to alleviate lack of resources.

In her article, "Stress and Coping in Children," *Young Children* (July 1986), Alice Honig has suggested some specific ways in which teachers can help children cope with stress.

- ☐ Recognize when a child is stressed.
- ☐ Demonstrate self-control and coping skills yourself.
- ☐ Enhance children's self-esteem through encouragement, caring, focused attention and warm personal regard.
- ☐ Help each child develop an inner source of pride and self-esteem.
- ☐ Use proactive intervention to avoid unnecessary stress.
- ☐ Acknowledge children's feelings and encourage verbal mediation.
- ☐ Help children distinguish reality from fantasy.
- ☐ Use gentle humor.
- ☐ Structure classroom activities to enhance cooperation rather than competition, and emphasize helpfulness, kindness and love.
- ☐ Find individual talk time.
- ☐ Encourge children to act out coping skills.

In conclusion, kindergarten-age children need to be children, allowed to rely on adults to care for them. Adults can reduce stress on children when they listen and try to understand children's points of view and their limited ways to think logically. Adults can also alleviate stress when they protect children's physical safety and insulate them from societal pressure. To accomplish these goals, adults must be in control of their own emotional needs and accept the responsibility for providing effective supervision for children. By spending valuable time with children and communicating that children are important, parents give children the nurturing they need. When a parent or a teacher allows children to be childlike, to play and to explore within appropriate, clearly identified boundaries, children have an outlet for stress and a means of building confidence in their ability to master their world.

Books that Foster Social and Emotional Development

Self-Concept and Self-Discipline

Alexander, M. *Sabrina.* Dial, 1971.
Anderson, H.C. *The Ugly Duckling.* Scribner, 1965.
Arkin, A. *Tony's Hard Work Day.* Harper & Row, 1972.
Baldwin, A. *Jenny's Revenge.* Four Winds/Scholastic, 1974.
Bottner, B. *Messy.* Delacorte, 1979.
Brandenberg, F. *Otto is Different.* Greenwillow, 1985.
Byars, B. *Go and Hush the Baby.* Viking, 1971.
Charlip, R. *Hooray for Me!* Parents, 1975.
Darby, G. *Like You, Like Me.* Benetic, 1970.
Duvoisin, R. *Donkey, Donkey.* Four Winds/Scholastic, 1974.
Getz, A. *Humphrey, The Dancing Pig.* Dial, 1980.
Klein, N. *A Train for Jane.* Feminist Press, 1974.
Krasilovsky, *The Shy Little Girl.* Houghton Mifflin, 1970.
Kraus, R. *Rebecca Hatpin.* Windmill, 1974.
Lasker, J. *How Do I Feel?* Whitman, 1970.
Leaf, M. *The Story of Ferdinand.* Viking, 1936.
Levine, J. G. *A Bedtime Story.* Dutton, 1975.
Levy, E. *Nice Little Girls.* Delacorte, 1974.
Lionni, L. *Cornelius.* Pantheon, 1983.
_____. *Frederick.* Pantheon, 1966.
Merriam, E. *Boys and Girls, Girls and Boys.* Holt, Rinehart, Winston, 1972.
_____.*Mommies at Work.* Knopf, 1961.
Peet, B. *Cowardly Clyde.* Houghton Mifflin, 1979.
Raskin, E. *Spectacles.* Antheneum, 1968.
Schertle, A. *In My Treehouse.* Lothrop, 1983.
Sendak, M. *Higglety Pigglety Pop!* Harper & Row, 1967.
Sharmat, M. *Grumley the Grouch.* Holiday House, 1980.
Waber, B. *You Look Ridiculous Said the Rhinoceros to the Hippopotamus.* Houghton Mifflin, 1966.
Wells, R. *Benjamin and Tulip.* Doubleday, 1973.
Yashima, T. *Crow Boy.* Viking, 1955.

Giving and Receiving Affection

Aliki, *We Are Best Friends.* Greenwillow, 1982.
Asch, F. *Happy Birthday, Mom.* Prentice-Hall, 1982.
Byars, B. *The Lace Snail.* Viking, 1975.
Carle, E. *Do You Want to Be My Friend?* Crowell, 1971.
Cohen, M. *Will I Have a Friend?* Macmillan Publishing Co., Inc. 1967.
Cooney, B. *Miss Rumphius.* Viking, 1982.
de Rigrier, B. *The Shadow Book.* Harcourt, 1960.
Dragonwagon, C. *When Light Turns Into Night.* Harper & Row, 1975.
Ets, M. *Play With Me.* Viking, 1955.
Flack, M. *Ask Mr. Bear.* Macmillan Publishing Co., Inc., 1932.
Freeman, C. *Corduroy.* Viking, 1968.
Herold, A. *The Helping Day.* Coward McCann, 1980.
Horvath, B. *Be Nice to Josephine.* Watts, 1970.
Kellog, S. *Won't Somebody Play With Me?* Dial, 1972.
Kroll, S. *Happy Mother's Day.* Holiday House, 1985.
Lasker, J. *Do-Something Day.* Viking, 1982.
_____. *He's My Brother.* Whitman, 1974.
Lobel, A. *Frog and Toad Are Friends.* Harper & Row, 1979.
Lystad, M. *That New Boy.* Crown, 1973.
Marshall, J. *George and Martha Rise and Shine.* Houghton Mifflin, 1976.
McPhail, D. *Sister.* Harcourt Brace Jovanovich, 1984.
Ness, E. *Yeck Eck.* Dutton, 1974.
Modset, J. *Come Here, Cat.* Harper & Row, 1973.
Pomerantz, C. *The Half Birthday Party.* Houghton Mifflin, 1984.

Giving and Receiving Affection
(continued)

Ross, P. *Meet M and M.* Pantheon, 1982.
Sharmat, M. *I'm Not Oscar's Friend Anymore.* Dutton, 1975.
Skorpen, L. *Bird.* Harper & Row, 1976.
Steig, W. *Amos and Boris.* Farrar, 1971.
Turkle, B. *Thy Friend, Obadiah.* Viking, 1969.
Udry, J. *Let's Be Enemies.* Harper & Row, 1961.
Viorst, J. *Rosie and Michael.* Atheneum, 1974.
Zolotow, C. *Hold My Hand.* Harper & Row, 1972.
_____. *Janey.* Harper & Row, 1973.
_____. *Mr. Rabbit and the Lovely Present.* Harper & Row, 1977.
_____. *The New Friend.* Abelard, 1968.
_____. *The White Marble.* Crowell, 1963.

Everyday Fears

Alexander, M. *Sabrina.* Dial, 1971.
Brown, M. W. *Goodnight Moon.* Harper & Row, 1947.
_____. *A Child's Good Night Book.* Whitman, 1943.
Cohen, M. *First Grade Takes a Test.* Greenwillow, 1983.
_____. *Jim Meets the Thing.* Greenwillow, 1981.
_____. *Lost in the Museum.* Greenwillow, 1979.
_____. *No Good in Art.* Greenwillow, 1980.
_____. *So What?* Greenwillow, 1982.
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5

Learning in Kindergarten

Learning in Kindergarten 5

The known developmental characteristics of kindergarten children and the approach to learning that most early childhood educators favor—an interactionist approach—should shape the kindergarten program. A kindergarten program developed on these foundations will feature integrated curriculum areas and play as a primary mode of instruction. Activities will be designed to encourage the development of critical thinking skills.

What is the integrated curriculum?

An integrated approach to curriculum recognizes that content areas in instruction are naturally interrelated as they are in real life experiences. For example, when adults host a party, they use knowledge and skills associated with many curriculum areas: they estimate costs (math); extend written or verbal invitations to friends (language); prepare food (science); plan activities guests will enjoy (social sciences); make decorations, select music, dance (arts); and use their physical strength and energy to accomplish all of these tasks (physical education).

A classroom in which an integrated curriculum is employed is usually organized like a workshop that offers choices of many activities. These activities are generated by the interests of teacher and children and serve as contexts for what is learned. Movement, conversation and self-directed learning are encouraged.

Teachers who integrate children's learning seldom divide the day into periods for math, science, language, social sciences, the arts and physical education; they refrain from setting inflexible objectives for what children will learn. Rather, they encourage children to investigate a topic or a set of materials and help them to learn from their investigation.

An assumption underlying the integrated curriculum is that when people have learned something they apply it to new situations. They then reflect on this experience and add to their knowledge. This assumption is consistent with Spodek's assertion that "learning takes place as a result of an individual's encounter with his environment" (Day, 1983, p. 7). This concept is central to the interactionist view of learning.

Another underlying assumption is that learning is a process rather than a collection of facts. An integrated curriculum reflects the holistic view of learning, which suggests that learning is natural, inevitable and meaningful when it is related to personal inquiry (Robison and Schwartz, 1982). Early childhood experts who recommend an interactionist view of learning also suggest that: (1) too much focus on content may result in the importance of the learning process itself being overlooked, and (2) splintering the curriculum into separate disciplines for isolated study fails to recognize learning as a meaningful whole.

In an integrated curriculum, learning is regarded as a process rather than a collection of facts.

How integrating the curriculum supports child development

Meeting children's individual needs is the main purpose of a child development approach to curriculum. The wide variety of growth patterns and the diversity of experiences within the kindergarten age group demand that programs allow for a high degree of individualized learning. In integrated

curriculum, children can engage in activities in ways that are appropriate to each one's level of development. For example, one child playing with a box full of buttons may sort them according to color and size while another may use the buttons to form letters and spell a word. Teachers help a child to learn from an activity by suggesting new uses or by asking questions that encourage seeing and using materials in a new way. Thus teachers individualize children's experiences by interacting with each child and by tailoring an activity to each child's current level of understanding.

Integrating curriculum areas through activity, especially through play, provides flexibility to meet children's needs and capabilities and capitalizes on individual interests (Robison and Schwartz, 1982). Early childhood educator Barbara Day reminds us that children are "naturally curious and eager to learn, and they learn best when they are able to follow many of their own interests and desires to learn" (Day, 1983, p. 2).

When teachers provide for integrated learning, they show that they value the process of learning and they foster the development of children's ability to make choices, to solve problems, to design tasks and to discover facts which have personal meaning for them. Allowing children to choose activities is vital because, when children are interested, learning is inevitable.

When children are interested, learning is inevitable.

When children choose an activity which interests them, they need enough time to become involved with the materials or people in a lasting and purposeful way. Dividing a school day into periods of study for each content area often results in putting children through a series of introductions, conclusions and transitions. Fragmentation is difficult for young children and denies them the opportunity to achieve a natural sense of closure and a measure of personal satisfaction in their learning.

Separating subject matter into content areas may be appropriate for older children who are conceptually able to arrange these areas into a unified whole. Young children, however, are still developing the ability to consider a whole idea and its parts simultaneously. Separating curriculum into content areas may fragment learning for these children and reduce the meaningfulness, variety and scope of what they learn (Robison and Schwartz, 1982).

Separating curriculum into content areas may fragment learning for young children.

An integrated, activity-based curriculum recognizes kindergartners' need for freedom of movement and opportunities to develop language and social skills through spontaneous interaction with peers and teachers.

To be consistent with an interactionist view of learning and understanding of child development, the kindergarten curriculum will:

- ☐ provide for active learning;
- ☐ use life's experiences as a basis for learning;
- ☐ reflect the holistic nature of learning;
- ☐ present content areas as interrelated;
- ☐ meet children's individual needs;
- ☐ capitalize on children's interests;
- ☐ allow children to make choices;
- ☐ help children develop initiative and self-reliance;
- ☐ foster interaction with materials and people; and
- ☐ provide large blocks of time, so that children can become involved with their learning experiences.

Utilizing activity centers

Activity centers—also called interest centers, play centers or learning centers—are a good approach to organizing space and time to achieve an integrated, activity-oriented curriculum. (For practical ideas for arranging the physical environment, see Chapter 3.)

A center's value for children is determined not by its label but by its effectiveness in involving children in play. Labels or categories for centers, however, can be useful in structuring children's learning. Some teachers find it useful to categorize centers into one of two general types.

- ☐ **Curriculum-area centers** feature manipulatives for mathematics and fine motor development, materials for language development and science exploration.
- ☐ **Interactive learning centers** are designed to provide types of play such as drama, construction, tactile, art media.

Teachers who categorize centers do so for a number of reasons. They know that a well-balanced, integrated, activity-oriented curriculum provides opportunities to participate in a wide variety of centers over a period of time. They also know that too many choices at one time can overwhelm young children. Some teachers solve this problem by limiting to five or six the number of centers a child may use each day. Others may offer as many as 12 choices, but group centers by category and allow children to select only one category at a given time. If centers are categorized, each type should still offer a wide variety of play activities.

The possibilities for centers are limitless. Whatever interests children can be used for learning. Centers may be prepared by the teacher with some potential activity in mind, or assembled spontaneously by children to meet a particular interest of the moment. Effective activity centers are:

Centers may be prepared by the teacher or assembled spontaneously by children.

- ☐ planned to allow ease of movement and accessibility;
- ☐ attractive and interesting to encourage exploration, inquiry and discovery;
- ☐ appropriate for a wide range of developmental capabilities;
- ☐ changed during the year by adding new materials to increase variety and challenge;
- ☐ open-ended, so children can use materials in a variety of ways; and
- ☐ organized to allow children to return materials independently.

The following activity centers as suggested in *Kindergarten in Georgia* (Georgia Department of Education, 1979), are appropriate:

- ☐ **A construction center** to encourage children to manipulate and create with blocks and block building accessories. A woodworking bench can increase construction possibilities.
- ☐ **A library center** in a prominent place in the kindergarten provides opportunities for children to look at books or listen to stories and offers a wide variety of picture books and story books. Large cushions on the floor and a rocking chair provide comfortable seating.
- ☐ **A cooking center,** available to children periodically, could include a hot plate, measuring materials, cooking utensils and a place to store cooking materials.
- ☐ **A game center** can house a wide variety of games such as lotto, bingo and games made by teachers and older students. Games are best circulated from dead storage to open shelves, so that only a limited number are available to children at one time.
- ☐ **An exploration center** is related to the biological, physical and earth sciences. Children can observe, classify, predict and report information from a variety of science experiences.
- ☐ **A multisensory center** supports activities designed to promote the ability to use all five senses—sound, smell, taste, sight, touch—in discriminating, generalizing, categorizing, analyzing, evaluating and thinking creatively. A variety of manipulatives may promote development in mathematical concepts, and other materials may promote listening, visual and auditory discrimination, and eye-hand coordination. [Chapter 3 features a complete list of materials appropriate to the kindergarten program.]

- ☐ **An art center** with paint, crayons, chalk, paper, etc. will invite children to creatively express their feelings and impressions of the world around them.
- ☐ **A dramatics center** is where role playing and imaginative play can help children clarify and expand concepts and experiences. This area will change frequently to provide settings such as a house, a supermarket, a shop or a business. When space permits, providing a housekeeping corner and one other dramatic-play setting maximizes children's benefits from this activity. This center should be located near the construction area to encourage incorporation of its materials in dramatic play.
- ☐ **A large motor development center** provides access to indoor and outdoor areas to allow children to participate in large movement activities such as climbing, running, jumping and balancing.

Although some content areas do not appear to be included in these activity centers, they may be integrated into the various centers. For example, if the teacher wishes to explore information about a particular foreign country (social science), picture books, posters and maps of that country may be featured in the library center. Costumes depicting the native dress of that area of the world may be included in the drama center, and the teacher may encourage related role plays or acting out folk tales. The media center may make available tapes, records and film strips of the music and art of the featured country, and children can experiment with simple foreign recipes in the cooking center.

Many teachers find that a scrapbook with photographs of children involved in a center is a valuable tool to help parents visualize children busily engaged in learning. If the photos are accompanied by analyses of the activities' contributions to learning, parents can gain more appreciation for the benefits of an integrated, activity-based curriculum.

For an alternative means of illustrating how a center activity integrates curriculum, see the curriculum wheels on pages 91 and 94-96.

Variety in Center Activity

There should be many opportunities for dramatic play: large housekeeping corner, small dollhouse, dress-up clothes for boys as well as for girls, outdoor areas.

There should be a wide variety of art media: paint, markers, glue, paste, scissors, fabric, cardboard, string.

Music should be a vital part of center activity: records, tapes, instruments, dancing.

Language experiences should be varied: reading books, flannelboard stories, writing, listening, discussing, playing games.

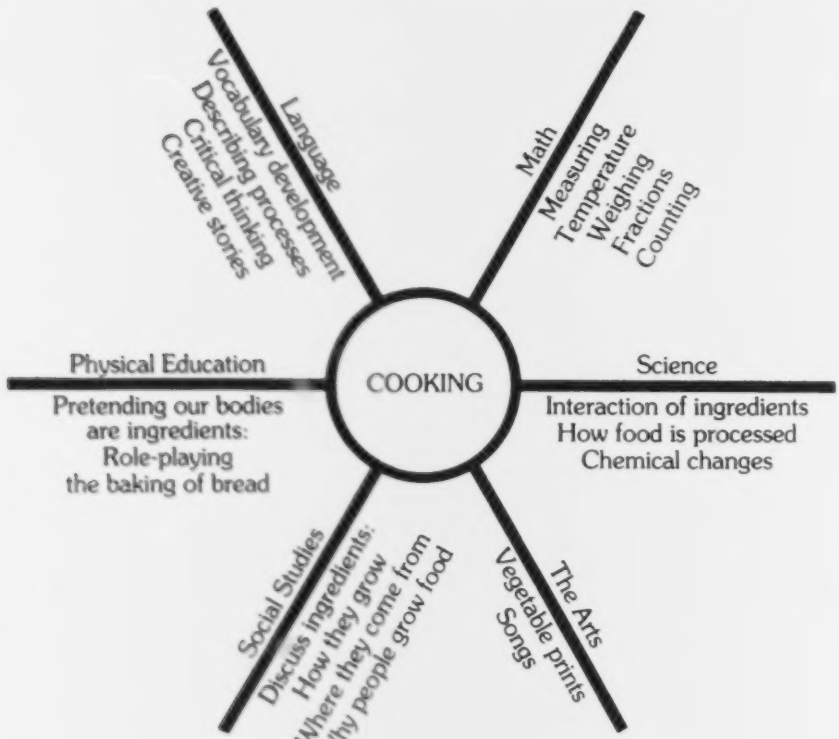
There should be some opportunities to follow patterns or structure inherent in the materials: puzzles, design blocks, matching games.

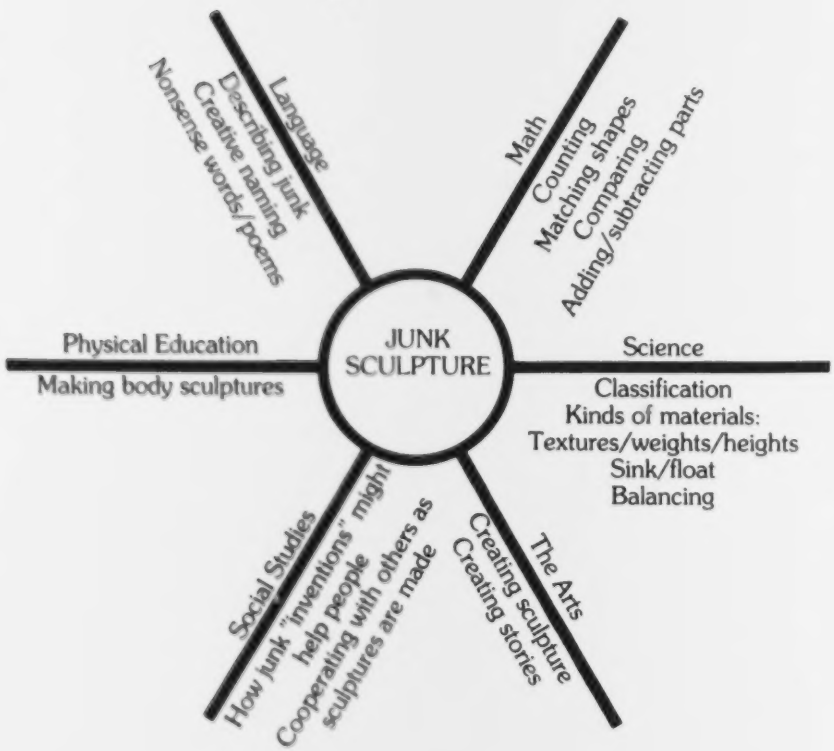
There should be a good supply of manipulative toys to build eye-hand coordination and finger dexterity.

Teachers should evaluate the space in their classrooms and be realistic about the availability of time and energy to prepare and maintain quality centers. Six effective centers are more desirable than twelve centers which lack materials or attractiveness.

(Adapted from Schmidt, Velma E. and Savery, Millicent, *Early Childhood Education: Learning Experiences for 3, 4 and 5 Year Olds*, 1979, p. 30)

Integrating Curriculum Through Center Activities





Balancing center activity. The use of activity centers requires careful planning to insure proper balance among important teaching considerations.

- ☐ **Balancing teacher supervision and child independence.** Choices allowed at any given time must take into account the teacher's need to balance activities that can be carried out by children independently and those that require close adult supervision. In a classroom with two adults, concurrently offering children woodworking, cooking, fingerpainting and obstacle courses would lead to obvious problems. One way to avoid problems is to provide one choice which needs adult supervision and four to five other choices that children can handle relatively independently. With this arrangement, the second adult can circulate, observing children's activities and facilitating learning. This allows for more individualized instruction.
- ☐ **Balancing amounts of movement and space.** Not only is it important to balance levels of adult involvement, it is also essential to balance the day's activities to meet children's need for movement. For many four- to six-year-olds, moving quickly is more natural than moving slowly. Consequently, during the largest part of the kindergarten day, children should be provided with large, relatively open spaces (defined by screens, shelves, rugs, etc.) which allow them to move freely. Centers for unit or hollow-block building, climbing, housekeeping or other dramatic play, art and outdoor activities allow for necessary freedom of movement. Approximately one-third to one-half of the kindergarten day should be spent in these types of activities.

Kindergarten children can function effectively and comfortably in moderately structured, less open spaces for shorter periods of time. Centers which may require quieter activity and less movement—math or fine motor manipulatives, writing, library, or easel painting—should be limited to approximately one-fourth of the kindergarten day.

Most kindergarten children can sit quietly in a whole-class grouping for 10 to 20 minutes at a time. Several of these short periods may be included in the remaining one-fourth of the day. In a typical large-group activity, the teacher may lead discussion, read a story, teach a song, direct a thinking game, introduce a new center or review and plan daily activities with the children.

When planning daily schedules, teachers need to provide large blocks of uninterrupted time for center activities. A session that is two and one-half hours long may be divided into these time blocks:

- ☐ a 60-minute block of time for interactive learning/play in activity centers and outdoors, in large spaces allowing freedom of movement;
- ☐ a 50-minute block of time for interactive learning/play in centers that provide for quieter play and less movement; and
- ☐ 35 minutes (divided into two smaller periods) for large group activity.

A longer session may offer each component more than once each school day, keeping the same balance and the same respect for children's needs. This balance in allocating time may not be possible on days when specialists in music, art or physical education are scheduled. For this reason, scheduling no more than one specialist per session is preferable. A modified balance can be maintained if the nature of the specialist's activity is considered. For example, a physical education period which provides for lots of freedom of movement may be considered part of the large movement component; a physical education period requiring children to follow many instructions in structured games should be considered as quiet play and/or large-group activity.

Unifying learning through a theme

Another way to integrate the curriculum is by using "themes" to organize learning activities. Themes can be selected by children or by teachers. They are often topics relating to social studies or science, such as the circus, mice, people in Africa, detectives, rainbows or teddy bears. They can, however, be "absolutely anything" that interests children. The theme approach allows children to use common experiences as the basis of learning (Robison and Schwartz, 1982).

When a theme is used to unify learning, a kindergarten classroom truly becomes a place of wonder. With the theme of detectives, the writing center is transformed into a secret code room; the block center becomes a police station; the drama center is the detective agency; the easel paintings are "wanted" posters; sand reveals footprints and fingerprints; art center materials are made into disguises; and the science center becomes a laboratory where evidence is analyzed. Stories, songs, poems, discussions, games and movement activities can also focus on the theme. Children and teachers can use their imaginations to create an environment where learning is not only unified and meaningful, but also fun and exciting.

Classroom themes provide opportunities for integrated curriculum planning.

The curriculum wheels shown in the diagrams on page 94 illustrate the use of teddy bear and rainbow themes to integrate and unify learning.

Children's books are also a rich source of themes for integrating curriculum areas. Some forms of children's literature lend themselves naturally to a particular curriculum area. For example, folk tales and myths align with a study of peoples from other lands. Mysteries provide a strong link with the inductive thinking associated with science, and nursery rhymes add zest to music and movement. Counting books and math go hand in hand, and, of course, all books enrich the language experience.

In addition to matching content area experiences and types of literature, books can be used to integrate curriculum areas.

- ☐ The subject of one book can serve as a theme for a set of learning activities.
- ☐ A literary character can be the focus of children's learning.
- ☐ A featured author can become the center of a curriculum wheel.
- ☐ A literary theme can create a framework for integrated learning.

These methods of integrating curriculum based on books are illustrated in the diagrams on pages 95 and 96.

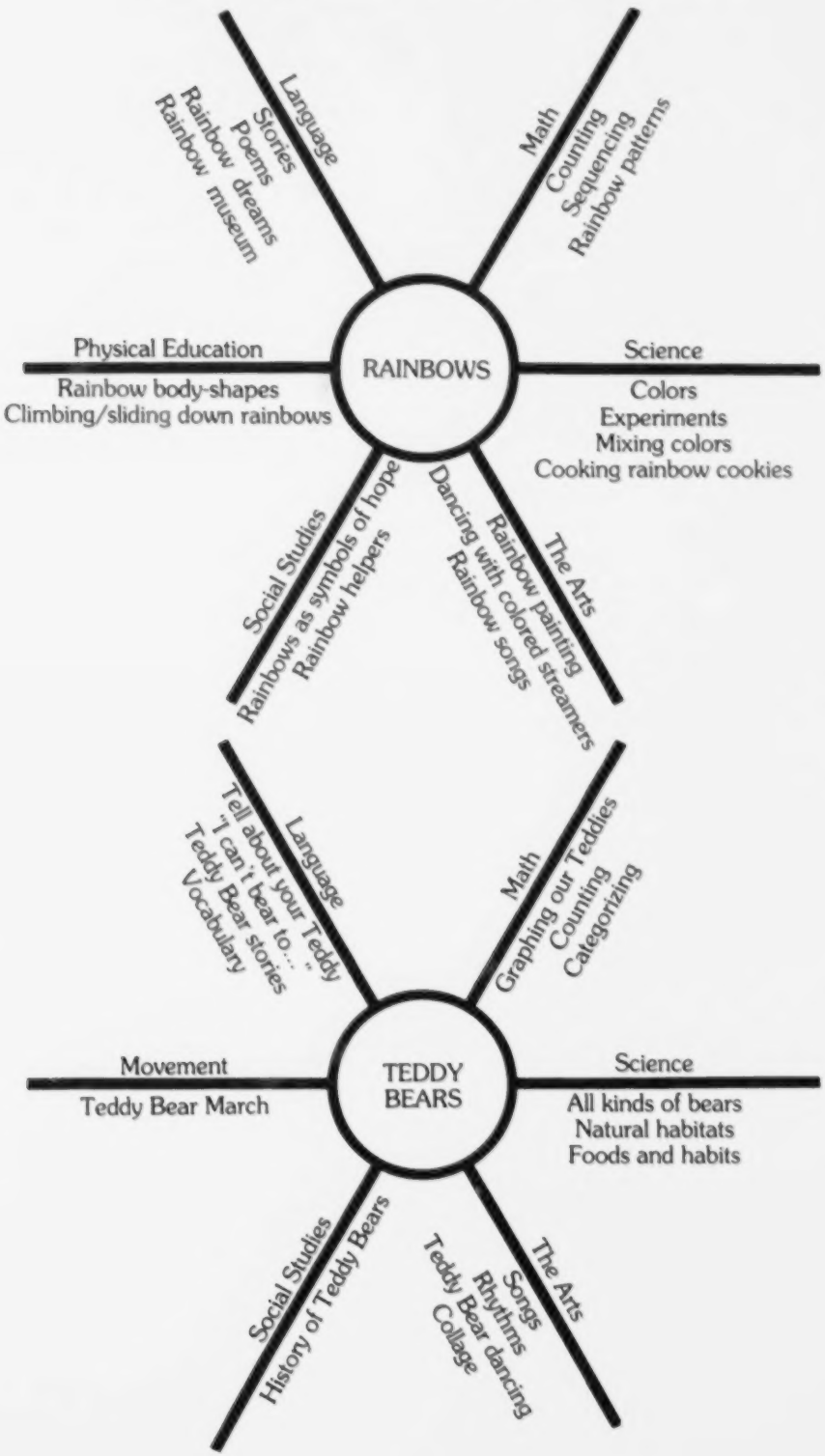
Using children's literature to integrate curriculum areas also helps teachers meet children's individual needs. Each book holds the potential for providing children with unique, personalized ways of satisfying their needs to belong, to achieve, to feel safe and to sense something beautiful. "Strong books, worthwhile books...supply them with clues to a better understanding of themselves and of other people" (Arbuthnot, 1961, p. 4). Using literature at any time fosters a joy in children for reading, writing and hearing stories.

What is interactive learning?

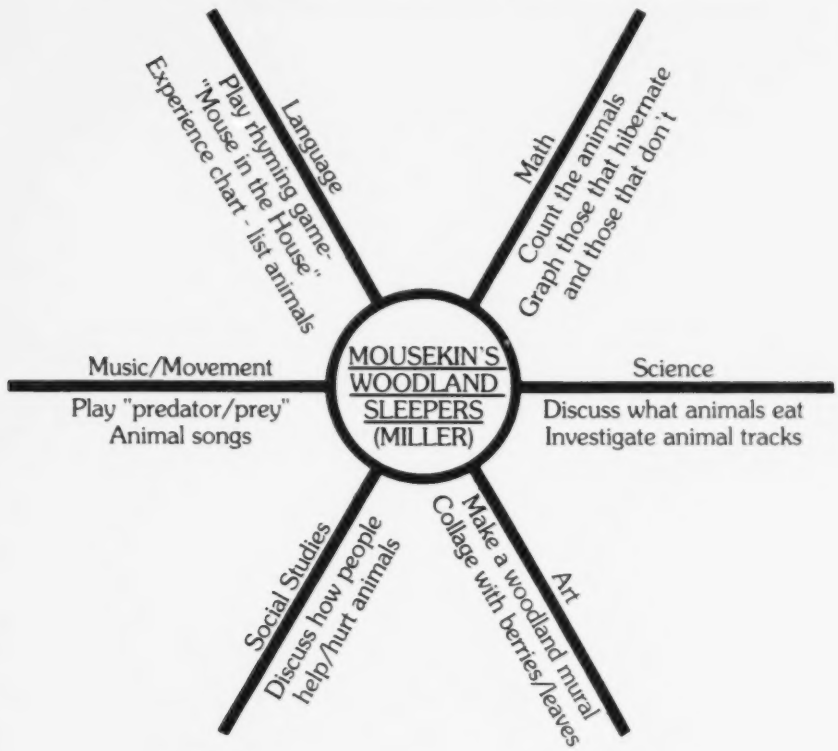
Interactive learning, sometimes called "play," is essential to providing an integrated curriculum. Although it is impossible to demonstrate a one-to-one correlation between a play activity and the area of growth it promotes, each play activity simultaneously:

- ☐ serves as a foundation for intellectual, physical and social-emotional development; and
- ☐ integrates curriculum areas of math, language arts, the arts, science, social studies, physical education, and health and safety.

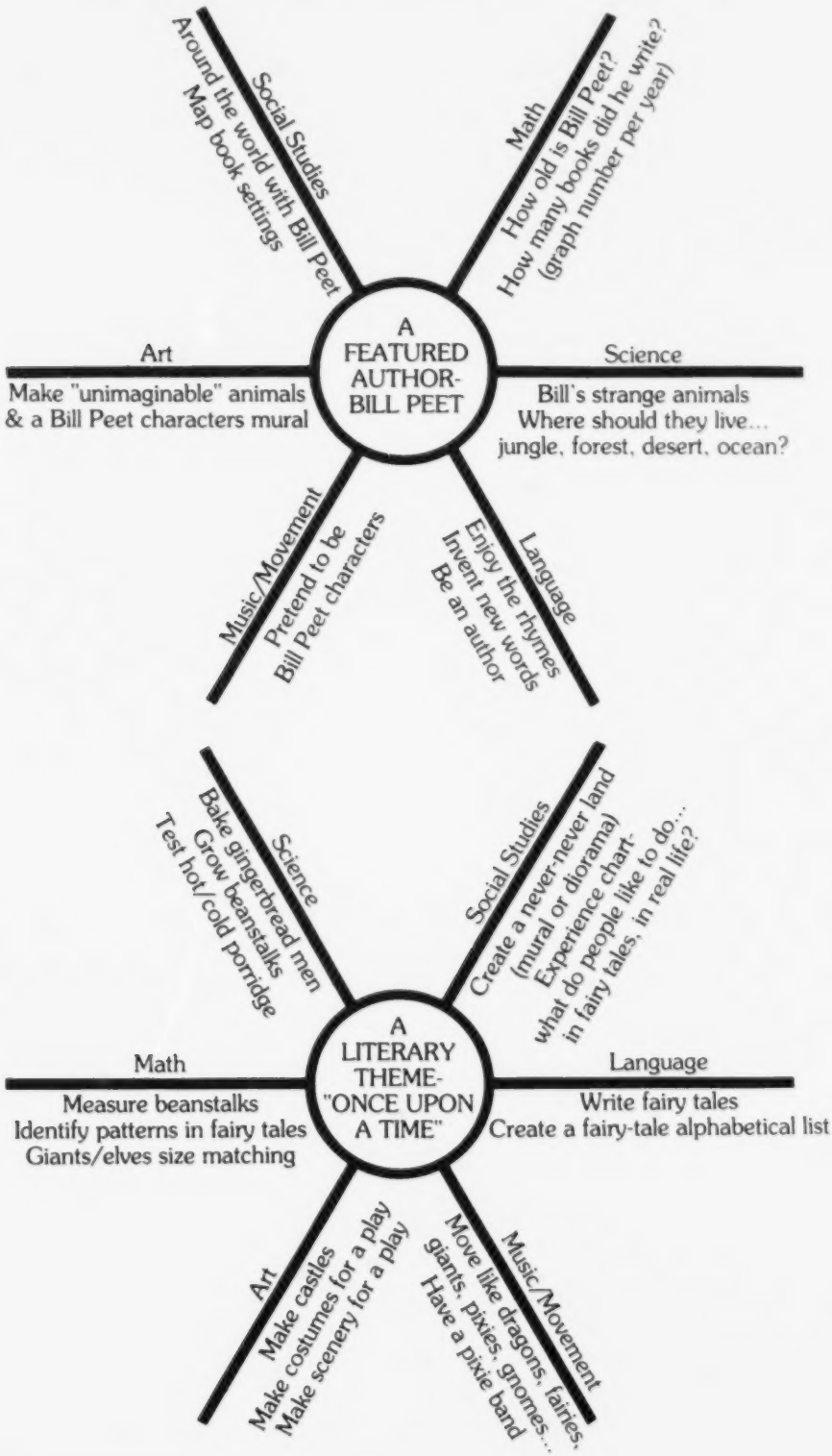
Integrating Curriculum Through Center Activities



Integrating Curriculum Through Center Activities



Integrating Curriculum Through Center Activities



Play is the central activity of childhood. It is a basic right of all children; without play, there is no childhood. Play is called interactive learning when it is seen as the way that children learn about themselves and the world. It is an adventure, an experiment, a beginning toward mastery of fundamental physical, social and intellectual concepts. Play is an important tool for learning because it is:

Play is an important tool for learning.

- ☐ a concrete experience;
- ☐ an explorative process; and
- ☐ a way for children to interact with their environment and with their peers.

Kindergarten classrooms should be rich learning environments deliberately designed by teachers to invite children's playful involvement in exploration, creativity and learning.

Primary types of interactive learning

Although many adults may conceive of play as a single activity, its educational value in kindergarten requires understanding that there are different types of activity in play and that each offers opportunities for different kinds of learning and instruction.

Dramatic play is most often socio-dramatic play which includes imitation, verbal communication and interaction between two or more people, imitative role playing, acting out situations, and persistence in the play. Examples: housekeeping corner, hollow blocks, doll house.

Construction play uses building materials which can be assembled in an infinite variety of ways. Examples: blocks, Legos, snap-togethers, woodworking.

Tactile play offers opportunities to mix, stir, pour, squish, mold, drip, etc., using materials rich in potential for sensory experience. Examples: sand, water, clay, mud, Goop.

Art media play allows children to combine a vast assortment of materials in endless ways. Examples: painting, drawing, collage, writing.

Language play occurs when children use spoken words, parts of words, or made-up-words for sheer entertainment. Examples: nonsense syllables, silly rhymes, mimicking.

Gross motor play occurs when children actively use large muscles in repetitive motion for a sustained period of time. Examples: climbing, riding a bike, swinging.

Games are a special form of play which most kindergartners are ready to enjoy. Games involve two or more people and a rule or rules. Games should emphasize cooperation rather than competition. Types of games include:

- ☐ musical games ("Farmer in the Dell," "London Bridge")
- ☐ board games (Candyland, Trouble, Hi-Ho Cherrio)
- ☐ thinking games (Simon Says, Guess What I See, Who's Missing)
- ☐ outdoor games (tag, ball, racing, hide and seek)

How play contributes to growth

Research reveals that:

Play fosters intellectual growth. It is vital in intellectual development. Yawkey (1980) suggests that "the intellectual ability to change oneself into some object, person or situation...and the intellectual ability to communicate in ways that permit understanding" are inherent in play. Sylva, Bruner, et al. (1976) noted that children allowed to play freely with

designated materials exhibited more thinking skills and problem-solving abilities than those not given the opportunity to play. Children who were allowed to play were also more goal-directed and persistent.

Other research supports Yawkey's position that play leads to the development of precision in language. According to Garvey (1977), language develops in play as a result of a child's need for techniques that will allow him to indicate "who he is, what he is doing, what objects represent...and where he is." Pellegrini and Galdi (1982) suggest that children who have opportunities to "recreate stories among themselves" during play have greater ability to understand and retell stories. These children can also answer subjective questions about a story more easily than their counterparts who have had less opportunity for this type of play.

Creativity is another product of play. Lieberman (1979) found a high correlation between "playfulness scores" and divergent thinking in kindergarten children. Sutton-Smith (in Garvey, 1977) suggests that play increases children's ability to approach a variety of materials in diverse ways. Similarly, Fein (1979) claims that play encourages children's potential to consider many alternative uses for objects.

Play lays a foundation for reading success.

Play lays a foundation for reading success (Gentile, 1983). Visual perception, eye-hand coordination and symbolic representation are used by the child in play. Additionally, play develops the power to analyze, make judgments, synthesize, formulate and see causal relationships.

Play fosters physical growth. The role of play in learning physical and perceptual skills has long been recognized (Sponseller, 1974). Complex learning tasks depend upon well-integrated neurological development, which is supported by playful activity. Sensory motor skills must be developed before the activities of reading, writing and arithmetic can be mastered. Consequently, play activity in the kindergarten facilitates the learning of basic skills in later years of schooling. Some experts believe that the substitution of television watching for active physical play has contributed to an increase in the number of learning disabled children.

Children love to move their bodies; they enjoy repetitive forms of physical motion; they delight in sheer manipulation of physical objects (Hendrick, 1975). Much of children's play consists of gross motor practice and self-imposed games which combine gross and fine motor movement (Sponseller, 1974). Play-filled physical activity is not only necessary for good muscle development, it provides positive feelings of well-being throughout life.

Play fosters social–emotional growth. Erikson (1963) suggests that play is of prime importance in the mastery of emotional needs. Through play, children not only gain confidence in themselves, they also learn to trust others. Through play the child learns to "give, receive, and share, express ideas and feelings, make choices, express friendship, see the perspectives of others, and include others in play" (Martin, 1984). Through dramatic play, children also grow in their abilities to plan cooperatively with others (Fein, 1979). Additionally, dramatic play offers children opportunities to identify with a variety of societal roles.

Play helps children express difficult feelings.

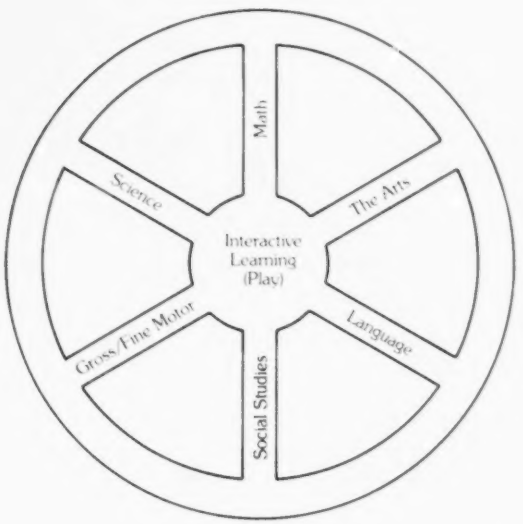
Dramatic play can also be valuable for relieving stress and tension and can be a healthy way to express difficult feelings. Through play a child can act out negative feelings towards a new sibling in a way which offers release without harming anyone. Anxiety and inner conflict can be resolved through play. Play is also a safe way to try out silly, taboo, frightening, absurd, funny and meaningful ideas (Brown and Shuster, 1985).

Finally, Sutton-Smith (1974) reminds us that those who play are more flexible and versatile. Versatile people are easier to work with; they make more competent leaders. Teachers and parents who provide plenty of opportunity for children to play are cultivating persons who, as adults, are more likely to respect themselves and make positive contributions to the lives of others.

Play in a classroom setting

The important contribution of play to children's growth in a classroom setting is based on the fact that play holds together many facets of kindergartners' learning. Kindergarten learning and play are related to each other much as the spokes of a wheel are related to the wheel's hub. The hub of a wheel holds the spokes secure; it provides strength for the wheel to do its work and is the center of the wheel's activity. Similarly, children's intellectual, physical and social-emotional development is firmly embedded in play. Play is a strong enabler of children's learning skills, attitudes and knowledge. Play is the center of kindergarten activity.

The diagram below illustrates the pivotal role of play as interactive learning in the kindergarten curriculum. Each spoke represents the fact that play activity carries to children both the potential for learning skills, knowledge and attitudes related to curriculum areas, as well as experiences that enhance all aspects of the child's growth.



Each curriculum "spoke" fosters intellectual, physical and social-emotional development

The following analysis of a dramatic play situation may provide insight about the benefits of play:

The Turkey Party

A Vignette of Dramatic Play

"I wanna be the baby," says Marsha.
"No, I wanna be the baby," says Karla.
"You were the baby last time," says Sharon to Karla.
"O.K." says Karla, "You can be the baby, but I get to be the mother."

Karla, Marsha, Sharon, Joshua and Mark are negotiating who will assume what role as they begin dramatic play in the housekeeping corner. Marsha is crawling on the floor between the wooden refrigerator, stove and sink—lined up against the wall—and the "kitchen" table. Marsha pretends to cry and scratches at Joshua's leg, saying, "Da-da, Da. Da," in her best imitation of a baby.

"Don't bother Daddy," says Karla. "He's cooking turkey. Aunt Barbara and Uncle Troy are coming for a party tonight." She hands baby Marsha a pretend bottle. "Go and drink this."

Analysis of the "Turkey Party" Dramatic Play Activity

How to read this chart:

Each rectangle contains skills, understandings and/or attitudes derived from play relative to a curriculum area and an area of developmental growth. For example: Science and physical growth are integrated through play when children pour Styrofoam bits and try to balance the turkey (a large block) on a tray.

	Language	**Mathematics**	**Science**
Intellectual Growth	communication vocabulary development writing place-cards writing a check for plumber sequencing events developing a foundation for abstract thought	counting (dishes) classifying (dishes, silver) patterning (table setting) dialing a telephone number adding (to determine number of place settings needed)	solving problems making inquiries observing cause and effect relationships speculating why sink didn't work
Physical Growth	speaking (leads to fluency) visual discrimination (writing letters, numbers)	visually discriminating the attributes of blocks (dishes, clothing)	pouring Styrofoam bits weight (comment re weight of turkey and trying to balance it on a plate)
Social–emotional Growth	expressing needs and feelings via words	negotiating with others (ordering and taking turns; using math concepts..."you had more turns...you did it last...you have the most...")	problem-solving relations between people observing people's reactions to social situations

Then Joshua says, "Oh, no! No water coming out. The sink's broke. I can't make any more food."

At this minute, Karla looks at Sharon and says, "Well, daughter, you set the table, right now. I must call the plumber." Karla carefully dials 411-0023.

Sharon yells, "But all the dishes are dirty!"

Karla responds, "Then wash them. We need four for our family and two for them (aunt and uncle)."

"But," says Sharon, "there's no water."

Joshua turns around from the stove now and hollers,

"Marsha! Look at the mess you made. Oh, no! Now I have to pick up this whole mess."

Meanwhile Karla reaches the plumber (Mark) and asks him to come. He fixes the sink. Mark writes out a bill. Karla writes out a check, using the pad and pencil nearby. She hands it to Mark.

One by one the family's problems are solved. The turkey is cooked; the plumber is invited to stay for dinner (so they need one more place setting). Placecards are made for the table. The table is set in a pattern of fork-plate-knife-spoon-cup. The scraps of paper, ripped and thrown about by the baby Marsha, get picked up. Karla washes the dishes, improvising a song while she "scrubs."

Everyone dresses up for the party—buttoning, zipping and tying as necessary. There are squabbles over who gets to wear which outfit; who gets to sit at the end of the table; which friends they should include to be aunt and uncle.

(continued on next page)

Social Studies	The Arts	Gross/Fine Motor
learning how to negotiate turns and balance own interests with the interests of others assigning roles	imagination	dialing the telephone
	swaying to the song Karla improvises as she washes dishes	sense of space eye-hand coordination putting on and taking off clothing crawling between tight spaces without bumping
cooperation empathy self-direction emotional outlet	creativity self-confidence mastery of material	using motor skill to help others (helping each other fasten clothing, pick up and put away)

They get blocks from the block corner to be food; count out portions as food is served; remark how heavy the turkey (a very large block!) is. They put Styrofoam bits for "water" into glasses at the table.

At cleanup time, the children are expected to put things away. They argue briefly about who got out what, but, with encouragement from the teacher, they work together to hang up clothes, return dishes to the cupboard, place blocks back in the block cart, etc.

The analysis in the chart on pages 100-101 shows that "The Turkey Party" dramatic play was rich in learning experiences. Children's intellectual, physical and social-emotional development was encouraged. The children explored and used skills, knowledge and attitudes associated with the major curriculum areas of mathematics, language arts, the arts, science, social studies and physical education. Any play activity can be similarly analyzed for its contribution to children's growth and learning, using the definitions of curriculum areas listed below and using the information about intellectual, physical and social-emotional development listed in the charts in Chapter 2.

Curriculum areas

In planning the integrated curriculum, it is necessary for the teacher or curriculum planner to be aware of the various content areas that activities are designed to foster. These curriculum areas are defined below.

The arts include activities that allow for the communication of ideas and feelings and that foster creativity. Involvement in all the arts, such as visual art, music, creative dramatics and creative movement, both develops specific artistic skills and encourages appreciation of the skills and creativity of others.

Language development activities foster the development of the child's ability to use and interpret the elements of language (words, sounds, letters) in a meaningful context (songs, stories, labels, discussions, poems, experience charts). Such development is a precursor to reading and writing skills.

Mathematics includes those activities that provide children with opportunities to explore spatial relationships, numerical relationships and data organization.

Science activities are those that encourage process-oriented learning through observing, classifying, measuring, using spatial relationships and numbers, communicating, predicting and inferring. Mathematics and science activities are often related.

Social Studies activities promote the development of a positive self-image and an understanding of other people and of the child's world.

Physical education, health and safety activities offer opportunities to understand such things as personal and environmental health, body management, nutrition, manipulative skills, accident prevention and other safety concepts. Some health and safety activities overlap with concepts in science.

All curriculum areas provide for interactive learning/play and for other process activities. More complete discussion of each curriculum area appears in Part II of the guide.

How does the teacher insure that play results in learning?

The presence of purposeful teacher involvement is one thing that distinguishes play in the context of school, or interactive learning, from play

outside of the kindergarten curriculum. Although learning can take place in either form of play, the role the teacher plays and the context of the curriculum influence the outcome, or the type and amount of learning that occurs. Either by direct involvement or by choice of materials and the design of the activity centers, teachers are always involved to one degree or another in the interactive learning process. For example:

- ☐ Children can completely initiate and direct play including the choice of play materials from the selection provided by the teacher and/or curriculum planner.
- ☐ Teachers can structure play by providing specific materials and/or setting.
- ☐ Interactive learning may be facilitated by teachers making suggestions to help children develop play themes or solve problems that arise in the course of their play.
- ☐ Teachers can interact with children during play by assuming a role suggested by the play theme.

The following questions may help teachers determine the extent to which they enable learning through play. The questions are related to teacher roles of planner, nurturer, observer, facilitator and interactor described in Chapter 3.

Did I plan carefully so that:

- ☐ the largest portion of the day allowed for spontaneous, child-initiated activity, in relatively large, open spaces?
- ☐ a moderate portion of the day allowed for moderate levels of movement and child-directed activity?
- ☐ the smallest portion of the day required children to restrict their movement as they participated in more structured activity?
- ☐ outdoor play was an essential part of the day's activity?
- ☐ there were many opportunities for dramatic play?
- ☐ new materials were introduced gradually, to assure sufficient mastery of materials as well as novelty of experience?
- ☐ a wide variety of materials and activities were available?
- ☐ the physical environment invited children to explore materials on their own?
- ☐ play was used as a tool to individualize learning experiences?

Did I nurture children's interactive learning by:

- ☐ letting them know I was interested in their activities?
- ☐ encouraging them to talk about their play?
- ☐ being available for assistance when needed?

Did I observe children's activity to discover their:

- ☐ likes and dislikes?
- ☐ favorite themes and interests?
- ☐ choice of peers?
- ☐ social interaction with peers?
- ☐ ability to solve problems?
- ☐ imagination?
- ☐ physical coordination
- ☐ thinking processes?

Did I facilitate children's learning by:

- ☐ being a model for playfulness?
- ☐ taking advantage of opportune moments to expand children's play?
- ☐ suggesting new ideas/props?
- ☐ commenting on what children are doing?
- ☐ asking open-ended questions?
- ☐ giving genuine praise for how materials are being used?
- ☐ encouraging children to explore and experiment with materials?
- ☐ valuing the child's discoveries?
- ☐ encouraging children to pretend and imagine?

Did I interact with children in their play and:

- ☐ demonstrate desirable ways of resolving conflicts?
- ☐ help them experiment with new materials?
- ☐ explore with them alternate uses for materials?
- ☐ model appropriate expressions of emotion?
- ☐ help them include a passive child?
- ☐ help aggressive children channel their energies in productive ways?

Why teach thinking skills?

The idea of teaching thinking skills to kindergartners is new. What is new, however, is more a matter of pedagogy than of substance. Facilitating intellectual development has always been a goal, but recent research concerning cognition has generated new insights that can be utilized in the classroom.

The long-range goal is to educate children to reason and make choices (Lipman, 1984). Teaching thinking skills can:

- ☐ increase children's capacity to deal with problems and reach decisions (Brandt, 1984);
- ☐ promote further cognitive development (Biber, 1977);
- ☐ promote curiosity, initiative, cooperation and independence (Goffin and Tull, 1985); and
- ☐ enhance intelligence (Sternberg, 1984).

Thinking skills are a vast complex of mental activities that contribute to children's ability to solve problems (Olson, 1984).

Many attempts have been made to classify thinking skills, and a wide variety of terms are used to decribe them. One system of classification divides these skills into four major categories called ***cognitive processes:***

- ☐ **inductive thinking,** which enables the children to reason and make inquiries;
- ☐ **critical thinking,** which helps the child evaluate a situation;
- ☐ **divergent thinking,** which allows a child to generate ideas or alternatives; and
- ☐ **metacognition,** which is the process of thinking about thinking.

The following list relates thinking skills used in problem solving to each of the four cognitive processes.

Thinking Skills Used in Problem Solving

Inductive	Critical	Divergent	Metacognition
observe	analyze	image	plan information-seeking strategy
quantify	synthesize	generate ideas/alternatives	talk with your brain
differentiate	evaluate	create	reflect on your own thinking
classify	decide	intuit	
compare	choose		
contrast	construct arguments		
sequence			
formulate cause/effect			
remember			
predict			
estimate			
infer			
generalize			

Social-emotional factors can affect thinking positively or negatively.

Children's ability to think depends on several factors. Social-emotional factors can affect thinking positively or negatively; fear or anxiety can block thinking; curiosity, interest or enthusiasm can improve the quality of thought. In addition, children's cultural backgrounds can influence how they think. Finally, children's developmental levels will affect their thinking. Children at a concrete operations level of development are limited in their ability to think logically.

The concept of stages of cognitive development, and its influence on thinking, is complex and comes from the work of Jean Piaget (see Chapters 1 and 2). According to Piagetian theory, children's thinking proceeds through a definite sequence of stages at a relatively predictable rate (Joyce and Weil, 1980). For example, kindergartners, because they are four to seven years old, are classified as being in the pre-operational stage of cognitive development: This means that they reason and explain events on the basis of intuitions or hunches rather than logic (Charles, 1974).

Piaget's theory describes the growth of thinking as a vertical progression, from the least complex and logical in the early years to the most complex, logical and accurate in maturity. Thinking skills themselves are often classified similarly in a vertical or hierarchical fashion, from the simplest to the most complex. Bloom (Paul, 1985) used the general format of plant and animal classification (or taxonomy) to classify thinking skills hierarchically as follows: knowledge, comprehension, application, analysis, synthesis and evaluation.

Because of the hierarchical nature of cognitive development and the hierarchical presentation of thinking skills by some theorists, such as Bloom, attempts have been made to relate the two hierarchies. Some experts suggest that children's levels of cognitive development dictate which thinking skills they can learn and which are beyond their levels of functioning.

Many other experts, however, argue that the development of thinking should be viewed as having two directions, horizontal as well as vertical (Sigel, 1984; Strong et al., 1985; Paul, 1985; Olson, C. B., 1984; Biber, B., 1977; Goffin and Tull, 1985). Thus, Piaget's stages of cognitive development represent the vertical growth of thinking—increased complexity, accuracy, completeness and logical nature—while thinking skills represent horizontal development.

Debates among theoreticians aside, it is important to keep in mind that children are capable of a variety of thinking skills regardless of their grade level, age or intelligence (Strong et al., 1985). Goffin and Tull (1985) suggest that problem solving is independent of the notion of readiness and

that children can use various thinking skills at their own levels of development. Thus, the concept of hierarchy in teaching thinking has more to do with how thinking is taught than with which skills can be taught (Strong et al., 1985). Most kindergarten teachers realize that 5- to 7-year-olds can make inferences, generate alternative ideas, estimate quantity and remember past events. They also know that the results of kindergartners' thinking are usually inaccurate, incomplete and full of logical loopholes. Kindergartners can also engage in analytic or evaluative thinking, but they depend on adults to structure and guide their thinking with carefully selected materials and carefully worded questions. For example, kindergarten children can usually answer questions such as: Why do these stories go together? Which group does this card belong in? Why do you think this worked? Teaching thinking skills does not entail helping children to acquire thinking skills, but rather helping them acquire breadth and richness in their thinking skills repertoire by playing with the whole range of skills (Olson, C. B., 1984; Biber, B., 1977). In teaching kindergarten children, or students at every other level of cognitive development, we must assume that all thinking skills are applicable. Teachers, however, must adjust teaching methods to match children's cognitive levels of development. They must also realize that:

How to Develop Thinking Skills

Process Goals for Children	Sample Teaching Strategies	Guiding Questions/Comments
Metacogitate	**Talking aloud:** Encourage children to talk aloud as they solve a problem.	Tell me what you did first...And then...? What did you say to yourself?
	Dramatization: When children become characters, in a sense they must think about what the character would think in order to act out a role.	When you were the mother, what did the mother think about when the baby tore up that paper?
	Modeling: Think out loud for children. Show empathy and verbalize it. Disclose errors in your own thinking.	I feel sad that Eric's missing our trip today. I think I'll write him a note to tell him...Uh-oh, that won't work. I think I need a bigger box.
Set and Achieve Goals	**Planning:** Hold class meetings to help children plan and evaluate their daily activity.	What do you want to do today? How can you accomplish that?... What did you get done?
	Taking credit: Help children identify what they do well.	What did you do today that you feel proud of?...Can you think of a way that you could share that with others?
	Choosing consciously: Help children explore consequences of their choices and decisions before decision making.	What do you think will happen if you do that?...What else might happen?
	Providing feedback: Rephrase children's thoughts or actions and verbalize them for children.	When do you *x*, this is what usually happens... The last time you did *x*, this is what happened...What do you think will happen if you do *x* again?

- ☐ the products of kindergartners' thought will lack accuracy, logic, completeness and complexity; and
- ☐ kindergartners will need careful help from adults to structure and guide their thinking.

Setting the stages. Teachers can help children develop thinking skills by converting their classrooms into "communities of inquiry." In such a community, conversations between teacher and children and among children themselves are the contexts "which create the disposition of being critical, speculative, caring, wondering, respecting others, listening" (Lipman, 1985).

Lipman's statement captures the essence of recommendations by many experts in the field of thinking who suggest that a particular kind of environment is crucial to the development of thinking skills. It is interesting that the environmental components they describe are consistent with (1) the interactionist model recommended in this guide, and (2) an integrated approach to curriculum discussed earlier.

A classroom environment that fosters the development of thinking skills will provide:

Process Goals for Children	Sample Teaching Strategies	Guiding Questions/Comments
Resolve Discrepanices	**Seizing the best moment to teach:** Take advantage of unpredictable events and use them to stimulate thinking.	What do you think we should do with these broken hoops?...How can we all get to see Sarah's turtle without frightening it?
	Brainstorming: Help children generate multiple potential solutions.	How many ways can you think of to make a circle with your body?...What could we do with this old tray?
	Trying out: Help children observe what occurs when they interact with materials.	How does that look now?...How is it different than it was before?
	Imaging: Tell children to close their eyes and look into their "mind's eye".	Pretend you are on a sandy seashore beach, lying on your back. Keep your eyes closed, but pretend to look in the sky. There's a tiny speck up there, and it is getting bigger and bigger...until now you can see it clearly...What do you see?
Internalize Need	**Distancing:** Help children solve a problem that requires them to deal with objects, events, actions of the future or past.	How was our trip to the farm like our trip to the museum?...If it rains tomorrow, what should we do about the scavenger hunt we have planned?
Solve Problems	**Reporting:** Help children tell about problems they are having, are solving, or have solved.	Can you tell me about a problem you have on the playground?...How are you solving the problem of not having enough blocks to finish your structure?
	Problem posing: Help children develop problems around a specific situation.	What problems would we have if we ran out of paint?...If the record player didn't work?

- ☐ many opportunities for discussion, with children doing most of the talking (Olson, L., 1984). If children have the chance to talk to each other, they will pose problems for, and demand solutions of, one another (Sigel, 1984);
- ☐ activities built on children's interests (Lipman, 1985);
- ☐ support for children's natural inquisitiveness, which makes them want to discover things about themselves and the world around them (Lipman, 1985);
- ☐ hands-on experiences with the qualities and relationships of the physical world: sensory experiences, large body action (Biber et al, 1977; Brooks, 1984).

Teachers help children develop thinking skills when they encourage them to:

- ☐ think about their own thinking (metacognition) (Falkof and Moss, 1984);
- ☐ make plans to reach distant goals and follow their own paths to achieve them (Goffin and Tull, 1985);
- ☐ resolve discrepancies; discrepancies evoke problem-solving responses (Sigel, 1984);
- ☐ internalize a need for problem solving as well as the process of problem solving. Sternberg and Wagner point out that, "To the degree that problem solving becomes spontaneous and conscious...metacognition seems to improve" (in Costa, 1985, p. 58). In turn, well-developed metacognitive ability relates to perseverance in problem solving (Costa, 1985).

In addition, Bereiter (1984) reminds us that teaching of thinking skills should not be viewed as a curriculum area nor as an enrichment course. Rather, thinking skills should permeate all of instruction.

Because conversation is the main context in which thinking skills are learned, most strategies for teaching thinking skills can be translated into questions or comments provided by the teacher to guide children's thinking. The nature of these questions and comments is crucial to the effective teaching and learning of thinking skills (Gall, 1984). When talking with children, teachers should value the child's point of view. Questions must be open-ended; that is, they should require a complete, thoughtful, individualized response rather than a "yes" or "no" or a "fill-in-the-blank" answer. The early years are the time to demonstrate to children that all questions do not have one correct answer. When children give an unconventional answer, the teacher should accept it as the result of the child's thinking and explore that thinking to gain a deeper insight to the child's cognitive developmental level. For example, if a teacher shows a picture to a child and asks, "Why do you think they call these horses dapple gray?" the child may respond, "Because they had apples for lunch." This child is making an auditory association between the word "dapple" and "ha-d-apples." The teacher could have responded noncritically to the child by saying: "Horses do like apples don't they? But dapple is another word for spot. See the gray spots?" The point is that, instead of using logic to develop a reason to explain all cases of such horses, this child relies more on free word association or intuition to explain things. Thus, it is important that teachers assess the cognitive levels of children so they can match learning experiences to children's levels of understanding (Grennon, 1984).

Additionally, Lipman (1984) suggests that teachers' "talk" should not be just any kind of talk, but talk which evokes differences of opinion. He also reminds teachers of the importance of listening to all children, not just to those who speak well. One other recommendation concerning teachers' questions comes from Languis (1980), who recommends that teachers should increase the amount of time they wait for children to respond to questions.

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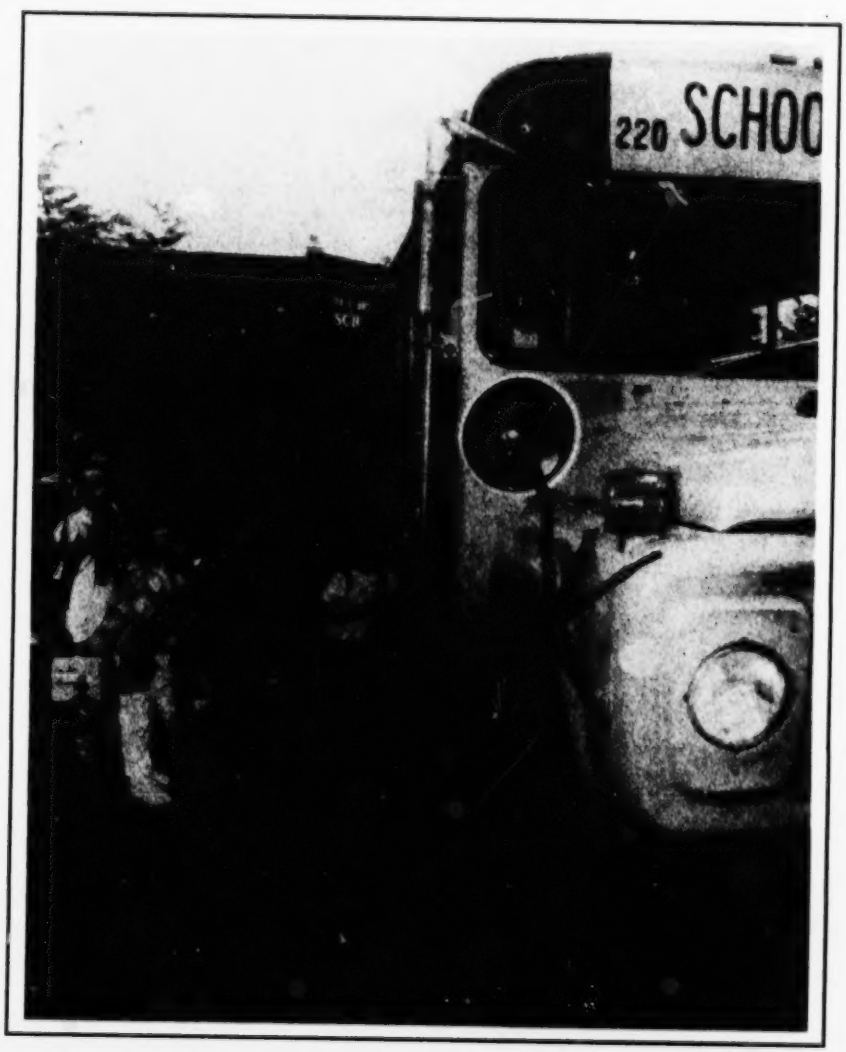
Organization of the Kindergarten 6



Organization of the Kindergarten 6

The teacher actively plans, implements and evaluates the learning environment each day. The process is circular and ongoing, with each evaluation serving as the basis for further planning. After the long-range goals for the year are established, specific short-term objectives must be developed in order to take into account each child's social, emotional, physical and intellectual growth. This short-term planning must consider each child's abilities, needs and prior experiences. Effective short-term planning will help provide realistic and appropriate learning experiences for every kindergarten child. In *Personalizing Education for Children: A Handbook for Early Childhood Education K-4* (Georgia Department of Education, 1982), p. 42-44, the following is suggested for planning, implementation and evaluation:

Planning. Both long-range and daily planning help assure maximum child growth and development. The teacher uses planning to organize larger units of activity for children, to organize materials and equipment in advance and to provide an overall framework for selecting and developing objectives and activities for children's growth. During the planning sessions, the teaching staff should:

- ☐ review and record child responses and growth within the classroom environment;
- ☐ review the organization of materials and centers;
- ☐ review the children's use of equipment and materials;
- ☐ identify, from a continuum of objectives, the specific objectives that will reinforce and extend children's growth and learning;
- ☐ develop classroom organization and activity to promote children's growth; and
- ☐ select methods for recording children's performance within active learning settings.

Consistent planning provides for:

- ☐ physical, intellectual, social and emotional areas of development;
- ☐ individualized needs of children;
- ☐ children's past experience in and out of school;
- ☐ children's involvement in the planning and assessment process; and
- ☐ supportive interaction between adults and children.

Implementation. Teachers and children work together in implementing the program. Implementation will be based on the planning concerns listed above. In meeting the needs of children's total development, the teacher will:

- ☐ use specific activities to meet specific program objectives in the area of development; and
- ☐ use activities which integrate growth, e.g., cooking activity in which children (a) measure—intellectual growth; (b) use the egg beater—physical growth; (c) participate with other children in planning activity—social growth.

In meeting individualized needs, the teacher will:

- ☐ observe and interact with individual children;
- ☐ give suggestions to a child needing help;
- ☐ assist children in evaluating their own work; and
- ☐ record a child's progress.

In using children's past and present experiences, the teacher will:

- ☐ provide activities in which children practice skills previously learned;
- ☐ develop the physical environment—bulletin boards, books, equipment—to reflect the children's cultural backgrounds; and
- ☐ use children's out-of-school interests—TV programs, toys—as themes for activities.

By involving children in the planning and assessment process, the teacher will:

- ☐ provide whole group, small group or individual time for children to talk about what they have done in the classroom;
- ☐ encourage children to suggest activity themes and materials to include in the classroom; and
- ☐ provide opportunities for children to develop guidelines for participation in learning activities.

In supporting interaction between the teacher and child, the teacher will:

- ☐ listen to children's ideas;
- ☐ verbally acknowledge and reinforce children's activity;
- ☐ accept the language and ideas of children; and
- ☐ extend children's ideas by adding information to the experiences they discuss.

Evaluation. The evaluation phase of the program involves both teaching staff and children. As children become more involved in planning activities, they should actively assess those activities they have planned. For example, they can represent their work by making models or pictures and by dictating or writing stories and then sharing them with a small group of children.

In order to offer a meaningful kindergarten program, the teacher's planning will also include collaborations with other professionals who are involved with the kindergarten program. The physical education, art, music, resource room, talented and gifted teachers, the library-media and reading specialists, and the special education resource teachers should be involved in planning both long-range and more specific short-term goals.

Classroom management

Because kindergarten children learn best by being actively involved in their environment in a variety of learning experiences, the kindergarten classroom is a very busy place. Not only does the teacher need to have carefully selected materials in each activity center, but an effective management plan for the use of each area of the classroom must also be created so that the learning environment enhances and facilitates teaching and learning. Such management includes the physical environment, routines and personnel. As summarized in this outline, adapted from *Kindergarten Excellence: Knowledge and Competencies of Kindergarten Teachers,* 1986, a report of the Minnesota Early Childhood Teacher Educators, Kindergarten Task Force, the kindergarten teacher:

A. Manages the physical environment

1. **Space**
   a. provides a place in which each child can store personal belongings
   b. provides areas in the classroom for individual, small group and total activity
   c. provides separate active and quiet activity areas
   d. provides space in which a child can be alone when he or she feels the need
2. **Arrangement and Storage**
   a. provides an orderly arrangement of equipment, toys and supplies which are accessible to children
   b. teaches children to be responsible for returning materials to their places when finished with them
   c. constructs, or helps children construct, bulletin boards and wall areas which are bright, colorful and pleasing to them; includes areas for teaching of units and areas for the display of children's work
   d. arranges the room in a way that is appropriate for the ongoing curriculum, the size of the facility, group size and characteristics of the group of children
   e. plans with the knowledge and recognition of the safety hazards typical of a kindergarten room and of kindergarten-age children
   f. assumes responsibility for adjusting light, heat and air conditioning to the needs of the children
   g. provides a healthful, restful, draft-free, comfortable environment for the rest period
   h. takes responsibility for keeping washroom clean and attractive
3. **Cleaning**
   a. provides proper and sufficient materials for children to use for cleaning up after an activity
   b. assumes responsibility for the supplementary cleaning which special activities entail, such as eating or preparation of food; art activities; care of animals; and sand or water table
4. **Learning/activity centers**
   a. provides places in the classroom which reflect each curricular area
   b. provides centers that reflect children's needs and interests
   c. provides a variety of interest centers which are available regularly, e.g., housekeeping, blocks, manipulatives, large muscle activities, trucks and cars, music, art, science, library
   d. provides a variety of learning centers which are topical or skill oriented, e.g., special unit centers, materials brought by children, holiday or seasonal centers
   e. provides activity area boundaries that are well-defined and observable to children

B. Manages Routines

1. Sets up a suitable routine for arrival and departure; attendance; milk count; toileting procedures; regular group-time routines such as calendar, weather, sharing or conversation time; efficient and speedy distribution of materials, cleaning up materials and supplies.
2. Carefully explains changes in routines to children

Clear routines help children organize themselves.

3. Uses routines to help children move from dependence on others toward independence
4. Helps children understand those rules necessary when moving to other parts of the building such as the gym, office, playground, washrooms, nurse's office and other grade rooms
5. Plans and uses a variety of ways of moving children smoothly from one activity to another and from one place in the room to another
6. Teaches children appropriate behavior for emergency situations, e.g., fire drills, ill children, accidents, when teacher is called out of the room
7. Teaches children appropriate arrival, dismissal and bus routines
8. Establishes and implements procedures for field trips and visits of resource people
9. Establishes and implements procedures for lunchroom behavior
10. Establishes procedures for the use of the washroom

C. Manages Personnel

1. Uses good interpersonal relations when working with school personnel: custodians, school secretaries, school nurses, lunchroom workers, principal, curriculum specialists, guidance counselor/school psychologists, first grade teacher(s), other kindergarten teacher(s), bus drivers, librarians, special education teachers, resource teachers, social workers
2. Provides adequate information and direction for persons who work in the classroom
   a. has written daily plans
   b. leaves written directions for substitute teachers which will maintain continuity for the children
   c. establishes a trust relationship with teacher assistants to facilitate all facets of children's education
   d. gives appropriate direction, supervision and feedback to student teacher (if there is one)
3. Helps children relate to and work with other school personnel
   a. models a spirit of cooperation with other school personnel
   b. prepares children for initial and later contacts with other personnel

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Since an important goal in kindergarten is to help children be independent learners, it is necessary for the teacher to set up the classroom in a manner which facilitates the development of independence, self-reliance and autonomy. Children develop independent learning habits in an atmosphere which fosters freedom of choice, the respect for the rights and property of others and the taking of responsibility for their own actions. One way to help children develop a sense of responsibility and independence, as well as to encourage decision making, is to allow them an active part in planning their work and in keeping track of the tasks accomplished. Individual planning cards, a pocket chart holder and a pegboard chart are examples of ways teachers and children can record where each child is working and playing. Additional suggestions for record keeping are found in the section on ongoing evaluation in Chapter 8.

Scheduling the kindergarten day

The daily schedule provides an important framework for a successful and joyful kindergarten program. Several factors are involved in the development of a workable schedule: the philosophy on which the program is based, developmental needs of the children, class size, size of the room, length of the day, physical facilities and resourcefulness of the staff. BALANCE is the key word as the teacher strives to create a workable schedule that will enable him/her to meet the needs of individual children. The kindergarten teacher must schedule a variety of learning activities that will include large groups, small groups and individuals. Some parts of the day will be group-oriented and teacher-directed; other blocks of time will feature time for exploration/discovery and for children to pursue their own interests and select activities of their choice. The active world of a kindergartner must include time for outdoor play (both in a half-day and longer day program) as well as indoor play, filled with opportunities for large muscle and small muscle activities. A rhythm of active and quiet activities should be offered throughout the day. A specific rest time should be incorporated into the full-day kindergarten program. Snack and lunch times are important in the daily schedule.

Scheduling the kindergarten day requires planning so that there is time and opportunity for continuous learning through the integration of activities that flow naturally from one activity to another and where there is time for children to complete their projects. Continuity should include time to practice or extend a learning experience presented in a teacher-directed activity, and a concept should have attention called to it throughout the day and in the future. The teacher must be sensitive to the needs and interests of the children and provide a flexible schedule which is arranged in blocks of time rather than brief, specific segments.

Continuity provides time to practice or extend a learning experience.

When classes such as art, music, physical education and library media are scheduled with specialists in the school, it is helpful to spread them throughout the week so the children have a variety of learning activities every day and so they complement the kindergarten program.

Intervention programs for those kindergarten children who require special services should be scheduled early in the school year so the children will receive support services as soon as possible. Intervention helps meet the individual needs of children who have weaknesses in language, fine motor, gross motor, visual and auditory modalities. The special needs of those children who require enrichment activities must also be taken into consideration when intervention programs are planned and scheduled. To the extent possible, such support services should be provided within the kindergarten classroom.

Pacing and scheduling should be responsive to the needs and characteristics of children represented by their various attention spans. Since each daily schedule must represent activities which are adapted to the individuals within the group, the following daily schedules can present examples only of how a few teachers have implemented half-day, extended-day for full-day programs.

Organizing an extended-day kindergarten

Scheduling everything that is important for a high-quality kindergarten program into a half-day session often proves difficult, if not impossible. In an effort to more fully meet the individual needs of kindergarten children, many school districts are lengthening the kindergarten day by offering carefully paced, extended- and full-day kindergarten programs.

Sample Schedules

Half-Day Kindergarten	**Arrival Activities**	Quiet activities, opening routine, planning for the day
	Group Time	Integrated curriculum content OR Inquiry activities (science, math, social studies) OR Language experience activities
	Center Time	Self-selected activities in learning and/or activity centers
	Nutrition Break	
	Group Time	Integrated curriculum content OR Physical activities (gross motor development, rhythms) OR Artistic activities (music, art, creative dramatics)
	Closing Activities	Evaluation of the day, gathering materials and outdoor play

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Extended-Day and Full-Day Kindergarten	**Children Arrive**	
	Announcements, Opening Exercises and Routines	
	Class Meeting	Read daily message, introduce new concepts in social studies, math, science, language arts, etc., plan the day.
	Snack	
	Activity Time	Blocks; housekeeping area; sand/water play; painting and other art activities; interest centers with manipulative materials and hands-on activities using such things as attribute blocks, letter and number games; story reading; listening center; woodworking, cooking
	Cleanup	
	Lunch in the Classroom and Outdoor Play	
	Rest and Quiet Time Activities	
	Sharing Time	
	Activity Time	
	Music, Creative Movement	
	Story	
	Preparation to Leave and Outside Play	

Extended-Day and Full-Day Kindergarten	**9:00 - 10:30**	Arrival and activity time (combination of child-directed and teacher-directed activities)
	10:30 - 10:45	Cleanup
	10:45 - 11:05	Bathroom and snack
	11:05 - 11:25	Storytelling
	11:25 - 12:00	Outdoor play or activities in the gym
	12:00 - 12:15	Bathroom and getting ready for lunch
	12:15 - 12:45	Lunch
	12:45 - 1:15	Rest and quiet activity
	1:15 - 1:30	Music
	1:30 - 2:15	Selected activities, e.g., cooking, carpentry, water play, art, language arts
	2:15 - 2:30	Cleanup
	2:30 - 2:45	Discussion of day; group planning for next day
	2:45 - 3:00	Dismissal

Extended-Day and Full-Day Kindergarten	**9:00 - 9:15**	Planning and Discussion: Opening activities, directions for work/play, calendar, weather, important events
	9:15 - 10:15	Learning Centers—Small Group: Children work/play in math, language, science, social studies, independent activities or children with teacher in small groups
	10:15 - 11:15	Choice—Small Groups: Blocks, manipulatives, motor activities, small-group activities, art, games, books, dress up, puppets, listening station, dolls, play house
	11:15 - 11:30	Preparation for Lunch: Wash hands, discuss foods and nutrition
	11:30 - 12:00	Lunch
	12:00 - 12:30	Play outdoors or indoors as weather permits
	12:30 - 1:30	Quiet Time: Rest, story time, quiet games, books, listening to tapes
	1:30 - 2:30	Activities: Music, social studies projects, special experiences, dramatizations, art projects, science experiences, physical education, library (this time is flexible as needs change)
	2:30 - 3:00	Learning Center—Small Groups: Children work by choice or by teacher request to extend or reinforce skills and learnings
	3:00 - 3:10	The Day in Review and Dismissal: discussion of the day's events, review of concepts and skills, reminders, coats and goodbyes

Note: Snacks available as individual children need them. Time allotments for special teachers—art, music, physical education, library media—will be determined in each classroom depending on teacher schedules and availability.

Extended-day kindergarten programs, as defined in Connecticut, provide for 180 school days for periods of four hours or more, or for meeting one of the criteria related to the Extended-Day Kindergarten Grant Program, established in 1987 by Public Act 87-357, which defines an extended-day kindergarten as one that provides a minimum of 720 hours per school year. Full-day kindergarten (which, by Connecticut's definition, is one form of the extended-day kindergarten) is provided for the same number of hours as any other grade level class within the school.

The principal reason for offering extended-day kindergarten programs is to provide best for the developmental and educational needs of children. Other factors may be related; however, only those which are directed toward meeting the needs of children and their families should be of highest priority.

An extended- or full-day program

An effective extended-day or full-day kindergarten program offers a relaxed and happy environment where individual needs are met. Lengthening the session provides time to assess fully each child's levels of development and to provide the appropriate learning experiences for every child.

Recognizing that an extended-day kindergarten is not a "mini" first grade is of crucial importance in each school district's planning and implementation of a program. A stimulating and creative kindergarten experience will help reduce stress on children, not add pressure for more academic learning at an earlier age.

Extended-day programs allow children to regularly experience success.

An extended-day or full-day kindergarten program offers a way to enrich the curriculum. Each child can regularly encounter success, develop positive attitudes about school and learning, and develop friendly peer relationships. Teachers have the time to provide experiences that will meet each child's individual needs. The range of learning activities can be wider. Children who have special talents can enjoy the opportunity to pursue a planned program designed to be challenging and enriching. In later years, some children who have attended extended-day programs may require fewer remedial services because more time was available for the kindergarten teacher to assess fully each child's progress, diagnose deficiencies and design strategies to meet individual needs.

The components of a high-quality program are no different for an extended-day kindergarten than for a half-day program, but the expansion of time allows for a more complete, more balanced and more pressure-free program. The components, mentioned in Chapter 3, include a small class size of 20 or fewer children with a staff/child ratio of 1:10; teachers and assistants who are trained or experienced in early childhood programs; developmentally appropriate learning opportunities; and a supportive home-school relationship.

Implementing an extended-day kindergarten

When a school district decides to lengthen its kindergarten session, it must carefully consider its reasons for making the change, its school population, parental attitudes and expectations, the kindergarten curriculum and the philosophy, attitudes and training of its kindergarten teachers. The formation of an advisory committee consisting of early childhood specialists, administrators, school board members, kindergarten and first-grade teachers, and parents may be helpful in making a decision. This committee should investigate extended-day and full-day programs by studying current literature and research and by visiting schools where the kindergarten classes have been lengthened.

Networking with other communities can provide valuable insights into available alternatives. The following options are consistent with suggestions offered by Susan B. Cruikshank (January 1986):

Many options are available in organizing extended-day programs.

- ☐ **Extending the day to four hours or more from the traditional two-and-a-half-hour day.** By such a change, a teacher would have only one group of children. (Teacher contracts will differ from one school district to another for teachers who teach extended-day kindergartens. For some, the position is considered full-time because teachers carry out appropriate planning or kindergarten-related tasks until the end of each full school day. For others, extended-day kindergarten teachers may be assigned to work with first-grade or Chapter 1 children or to assist in the provision of special services.)
- ☐ **Providing an all-day program where each child has two full days and three extended days each week.** Kindergarten children are assigned two days when they will stay the full day, while their classmates leave before or after lunch. This enables teachers to work closely with small groups during the afternoons. On the extra day, teachers can prepare materials, make parent contacts or have child-study sessions which will lead to better preparation for the kindergarten class.
- ☐ **Phasing in children to the full-day kindergarten program.** Over the first four to six weeks of school, children gradually move from a half-day to a four- or five-hour day, and then to a full day; or, all children attend the morning session and each day a different one-fifth of the class stays for the full day. This second method allows children to become familiar with the school setting and to become oriented to school routines in smaller groups, and provides the teacher with time to observe and record information about each child.
- ☐ **Piloting extended-day or full-day kindergarten programs.** School districts which are unable financially or which lack space to implement such programs in all schools or want a year to try a program on a small-scale basis, might pilot one or more of the models in selected classrooms.

Those options and other considerations can be divided into a three-phase plan of implementation as suggested by the Connecticut Early Childhood Education Council's *Report on Full-Day Kindergarten* (1983, p. 6-7).

Phase I

- ☐ Collect data on extended-day kindergarten programs from school districts which offer them, from consultants in the State Department of Education, from community and college early childhood specialists, and from a review of the available research literature.
- ☐ Ascertain needs for offering an extended-day or full-day kindergarten program by discussing the purposes and objectives of kindergarten and by considering any need for change, as well as by surveying parents for their ideas and needs concerning their potential kindergarten children.
- ☐ Give appropriate staff the opportunity to visit such programs and to observe and consult with the full-day teachers in those programs.
- ☐ Present a proposal to the local board of education with appropriate research, rationale for a longer day program and proposed budget. There should be plenty of opportunities for discussion among board members, school personnel, parents and community participants.

Phase II

- ☐ Allow sufficient time for cooperative/collaborative planning by a team of early childhood educators, including local nursery school/day care teachers, kindergarten teachers, parents and administrators. Planning should include the development of goals and objectives for a longer day program, the provision of a developmentally appropriate program, the ordering of any necessary materials and equipment and the development of communications for parents and children which will help prepare them for the new extended-day or full-day experience.
- ☐ Plan for staffing, space needs and initial extended-day teacher professional development, since the offering of a longer day kindergarten program will necessitate the addition of teachers and classrooms. Teachers with experience in early childhood education should be provided for such programs.
- ☐ Have parent meetings at each elementary school where the program will be provided, for the purpose of discussing such a program and its implications for their children.
- ☐ Schedule frequent professional development days in which teachers can work on curriculum and program planning.

Phase III

- ☐ Continually evaluate the extended-day or full-day kindergarten program after it is implemented in order to plan for necessary changes or to pursue that which is working well.
- ☐ Schedule time for ongoing professional development for kindergarten teachers and their assistants.
- ☐ Hold periodic kindergarten parents' meetings; work together with parents in home-school activities; support parents in their roles and work together to make the kindergarten experience the best that is possible for each child.

What children do during a longer day

A longer day provides more opportunity for continuity, reinforcement and enrichment of experiences through individual, small-group and large-group activities. A day that is longer than the required two-and-one-half hours allows for a balanced program which integrates curriculum areas, activities and ideas. It allows more time for rich language experiences; for exploration, discovery and problem solving; for the arts; and for physical activity and play. The latter all occur in an environment that allows for social interaction and for the development of positive self-esteem. The longer day provides activities appropriate for all children who come from diverse cultural and family backgrounds and from a variety of prekindergarten experiences.

"More" is often associated with a longer day: more teachers, more space, more equipment and more taxpayer dollars. What "more" means is linked to basic philosophical assumptions about the education of young children—what, when and how should they learn. (Cruikshank, February 1986)

Lengthening the school day should allow for a pressure-free, appropriate program for kindergarten children, not for a more academic, highly structured pencil-and-paper program or a first grade curriculum. In a school reform era, care must be taken not to equate "real" learning and the opportunity for "more" learning with preprimer readers, workbooks and ditto sheets as the core of the kindergarten curriculum and with the improvement of test scores as the primary evidence of learning. More time, however, can mean more opportunities to insure school success by: increasing oral and written language activities from a "language experience"

approach, permeating the program with all types of children's literature; increasing the use of integrative activities which provide for the teaching of skills in meaningful ways; fostering thinking and helping children make connections; establishing learning centers where children are taught to choose a center, to carry out a task, to have their work checked, to clean up and move on to another center; and where children's strengths and weaknesses can be ascertained in a systematic way. Manipulatives and hands-on experiences are the real textbooks of the kindergarten, so more time needs to be provided for their inclusion.

One of the biggest differences in developing a schedule for a longer day, rather than for a two-and-one-half-hour day, is the provision of personal needs activities. In a full-day program, there should be a morning and afternoon snack and a nutritious lunch. It is important that kindergarten children eat together with a familiar adult in a small group. Lunch time should be a relaxed and enjoyable learning experience, as well as an opportunity for socializing. Lunch is usually followed by outdoor play. Play areas should be close to the building, but separated from older children for safety reasons and for meeting the needs of younger children. The program should also include an extended rest period when children may lie on cots or mats and sleep or rest. Everyone should rest for a short while; children who do not sleep should be permitted to use equipment or materials that will not disturb sleeping children. Just as music can support movement and play, so can it help in establishing a mood for rest if it is slow in tempo and low in volume.

Advantages and disadvantages of an extended- or full-day kindergarten

A Report on Full-Day Kindergarten, a publication of the Connecticut Early Childhood Education Council (1983), lists the following advantages and possible disadvantages of a longer kindergarten day. The advantages are as follows:

Advantages

- ☐ more time for children to develop self-awareness and thereby to develop strong, positive self-images, as well as greater respect for themselves and others;
- ☐ greater blocks of uninterrupted time for learning experiences in a more relaxed atmosphere;
- ☐ more time for play/discovery activities and for the development of readiness skills;
- ☐ increased opportunities for children to develop language skills through language experience activities which are an acknowledged part of reading;
- ☐ greater opportunity for children to receive more individual attention from the classroom teacher and/or from supportive service personnel;
- ☐ more time for creative and enriching experiences such as cooking, field trips, art, music, dramatics and physical education;
- ☐ increased opportunities for children to develop stronger social relationships with their peers and adults;
- ☐ additional time for children to talk about experiences, to solve problems, to engage in critical thinking, to organize ideas and to arrive at conclusions, as well as to capitalize on spontaneous learning situations when they arise;
- ☐ increased participation and involvement of children in broader school activities such as school assemblies, "buddy" programs with older students, field days, etc.;
- ☐ a lunch time in which sound nutrition, good eating habits and social skills can be stressed;

- ☐ greater opportunities for children of limited English proficiency to increase fluency in English;
- ☐ additional time for the teacher to observe and discover a child's individual needs, strengths and problems, in anticipation of planning an appropriate program for each child (since each teacher has, now, only one group of children each day, rather than two separate groups);
- ☐ a greater balance between child-initiated and teacher-directed activities;
- ☐ greater opportunity for help and attention for handicapped children;
- ☐ more time for working with individual parents in developing a parent-teacher partnership for the benefit of their children;
- ☐ needed support for working parents (keep in mind, however, that additional services before and after school will be needed in order to adequately provide for child care needs); and
- ☐ a more consistent day for the child who otherwise would have a fragmented day, moving from place to place for needed child care services in addition to his kindergarten experience.

The possible disadvantages of a full-day kindergarten program are as follows:

Disadvantages

- ☐ The danger of overemphasizing formal and too structured academics. If a longer day is used to increase the amount and proportion of structured academics, the negative effects upon the child may outweigh the positive ones;
- ☐ The length of the day may be too long and tiring for some children, especially if the program is not developmentally appropriate;
- ☐ The need for additional personnel, classroom space, materials and equipment may make a full-day kindergarten program financially prohibitive; and
- ☐ The situations which may occur in the cafeteria and on the playground can overwhelm some children if not planned for in appropriate ways for young children.

Is extended-day kindergarten for every child?

When the kindergarten day is lengthened, options should be made available for children for whom the extended day seems too long. Both parents and teachers should have the opportunity to recommend that a kindergarten child spend a shorter time in class if that seems to fit the child's needs. Some children may need to attend half-day sessions for part of the year before they are comfortable in a longer day program. However, if the extended/full-day program offers individualized learning experiences in a flexible, well-paced and relaxed setting, the longer day will meet the needs of every child without causing tiredness or fatigue.

If the extended-day program will not be offered to all childen within a school, it is wise to consider the philosophy of the program and phase in opportunities for admitting all children as soon as possible. It would also be helpful to contact a number of school districts which were in a similar position, initially, to learn about feasible options for the selection of children, whether by lottery, determined need, or equity among selected children.

For research, evaluation and resource information regarding extended-day kindergarten programs, for school district resources and contacts in Connecticut, call or write the kindergarten/primary education consultants in the Connecticut State Department of Education.

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Building a Home-School-Community Partnership

7

Building a Home-School-Community Partnership 7

"The history of American education reflects that the roots of the public schools are deeply tied to the neighborhood, the community, and the home."

— Ira J. Gordon

Thus Ira J. Gordon (1976) addresses the importance of building effective home-school-community relationships.

Today's parents have many difficult choices to make about the education of their children. They are often bombarded with "advice," often conflicting, from a variety of media, from well-meaning relatives, from neighbors and friends, as well as from educational institutions. Contemporary trends in child rearing, marriage relationships, family patterns, employment of both parents and frequent relocation, all have a significant effect on families and children. To help relieve the stress children feel because of the complexity of life today, schools must encourage parent involvement and support family functioning. Cooperative effort by teachers and administrators is necessary to create the effective partnership among schools, families and the community.

Parenting may be provided by the child's mother and father, by a single parent, by guardians who may be grandparents or other extended family members, or by other significant individuals who take on the parenting role. Reference to "parent" may include any of the above relationships with the child. Schools need to be flexible in the ways that appropriate interactions among parents, school and the community can take place. Those opportunities should reflect the various roles, attitudes and needs of a divergent population of multicultural, multiracial and varied socioeconomic backgrounds.

The intent of the home-school-community partnership

The ability to use the resources of the home to aid in successful kindergarten instruction is a skill that can reward both student and teacher with successes that otherwise might never be achieved. This chapter provides the kindergarten teacher with some insights into home-school considerations that will enhance the school's effort to bring the resources of the home to the classroom while supporting the capability of the home to sustain and enrich the offerings of the kindergarten. It is recognized that most teacher preparation programs and schools do not focus on the home-school-community partnership. While this chapter cannot provide all the necessary content, it does offer detailed suggestions for building cooperative relationships with all families.

Rationale for including home-school-community partnerships as a program consideration

Home-school relationships are important for any school program or activity. Responsibility for education does not rest solely in the hands of professional educators. Both the family and the community make unique contributions. Parents, in fact, are the young child's first teachers.

The rationale for parent involvement is based on our belief in individual dignity and worth, and on our belief that group action and understanding are fundamental needs basic to American society. Or, put another way, teachers and parents must work together to realize the best possible education for their children. Young children need to see their parents and their school agreeing on learning goals. This helps children grow with security. In addition, experts are agreed that parent involvement helps reduce conflict between parents and school. If close contact is maintained, the teacher is less likely to violate the parents' cultural standards. Administration and special staff support and cooperation are also crucial.

Teachers should share with parents the classroom goals that have been set with the child.

Parents and teachers have responsibilities to each other and to their joint charge, the child. Teachers should feel comfortable in sharing with parents the classroom goals that have been set with the child. Enlisting parents' help in attaining these goals is appropriate when that participation is clearly defined and within the capabilities of the family unit. Often, special assistance will have to be provided the family in order for them to carry out home instruction consistent with classroom objectives.

The shared mission of both parent and kindergarten teacher is to help the child maximize his or her potential in a safe, developmentally appropriate environment. Understandably, each may have differing opinions of the meaning of various aspects of this mission or how it might best be achieved. The process of establishing trust in reaching a consensus about areas of responsibility and support is the essence of the home-school partnership.

Home-school partnership—a definition

The involvement of the home in the education of children can take many forms depending on the needs of the school and students and the talents or resources of the home and parents. The creative mechanisms through which the resources of the home are meshed with those of the school for the benefit of children are known as the *home-school partnership.*

Home-school programming and support may take place on several levels within the school. Many schools have paid staff people who are responsible for community and parent involvement. At this level, the resources of the community are sought to benefit the school in a manner that may be less personal or less tailored to an individual child. Another type of home-school involvement takes place at the classroom level. This involvement generally results in direct benefits to the child through the planning and cooperation of teacher and parent. Such parallel levels of programming can maximize the potential for home-school benefits.

Parent-school communication

Teachers owe each family the privilege of clear communication. Although parents are encouraged to reciprocate, it is the responsibility of the teacher to gather information that will enable the resources of the classroom to better serve the child. A self-examination of one's personal prejudices, social apprehension and knowledge of the family's background and circumstances can insure that personal attitudes do not interfere with the teacher's professional obligation to carry out this responsibility.

A teacher's interaction with the home is generally characterized by soliciting information or services from the family on behalf of the school or child, or bringing services to the family on behalf of the child or family unit. Each characteristic requires certain assumptions on the part of the teacher that can facilitate or inhibit smooth parent-school communications.

School/Teacher Assumptions Related to the Gathering of Information From the Family	School/Teacher Assumptions Related to the Provision of Services
The family has something that can benefit the teacher/school.	The teacher/school has something that can benefit the child/home.
The family is willing to provide assistance in the service of the child/school.	The family is willing to accept assistance or intervention in the service of the child/family.
The family's values associated with giving (to schools) are amenable to the teacher's information gathering approach.	The manner in which the service is offered is appropriate or consistent with the cultural attitudes regarding receiving assistance.
The direct approach in securing the desired service is the most appropriate and sensitive manner for meeting this objective.	The home's culture is amenable to a direct approach, and the family will not be caused embarrassment or the need to 'save face'.
The request is appropriate relative to what is being asked of other parents and is consistent with the family's ability to provide.	The service does not attract disparaging or negative attention to the family within or outside the school.

Time invested in affirming positive assumptions, or finding alternate routes that do not violate trusts or cultural practices, will help create positive parent-teacher communication.

Encouraging parent involvement

Open and clear lines of communication are essential for a good parent-school partnership. When they communicate with the home, teachers demonstrate that they value the role parents play in their children's lives.

> The defense of this position rests on moral grounds as well as on research evidence. It does not seem possible for a society to morally justify the encouragement of parent abdication. Parents must be involved in decisions affecting their children, and their role in influencing early development must be recognized. Research in minority, ethnic, and socioeconomic groups makes exceedingly clear the importance of the parents in the early learning of children. There is also research evidence to indicate

> that the parents, when trained, may be as successful in teaching their children as are the professionals. While this evidence is heartening, the justification for parent participation in decisions and programs affecting their children could be made solely on moral grounds. (Lay and Dopyera, 1977, p. 425)

The following suggestions for encouraging parental involvement are adapted from Gordon and Browne (1985):

- ☐ Prepare parents for what they can expect from their child's school experience. School policies and a yearly calendar should be written and reviewed with parents, as part of the kindergarten orientation, when the child enters school so that parents will know what their responsibilities are and how the school can be of assistance.
- ☐ Protect the parent-child relationship by enhancing the pride children naturally feel about their mothers and fathers. Reinforce the unique place families have in children's lives. Parents need teachers to support them in raising their children and they like positive reinforcement.
- ☐ Communicate with parents frequently and regularly. Be sure to know the parents by name. If they bring their children to and from school, take advantage of the daily contact. Find ways to touch base with those parents who do not come to school every day.
- ☐ Respect parents for the difficult job they have and the roles they play. Accept them as people with individual religious, cultural, social and ethnic backgrounds. Respect their privacy and their right to disagree. Do not provide one parent with information about another. Above all, respect the unparalleled roles they play in the growth and development of their children.
- ☐ Listen to parents. Hear them out. They, too, have experiences to share and their views deserve respect. Listen to them with understanding and try to see their points of view without judging or jumping to conclusions.

Teachers should listen to parents with the intent to learn from them.

[Also see Chapter 4 of this guide for suggestions for dealing with families with special problems, stepfamilies, single parents and two-parent working families.—Ed.]

Creating good rapport with a child's family not only helps families and children, it also provides the teacher with insights that are essential to responding to each child's individual needs.

There are many techniques that can be used in developing good communication with parents. Successful approaches include:

- ☐ **Newsletters** that give a general idea of what the children are doing and special events taking place in class. They may feature stories and poems by children or items of personal achievement. Although individual notices are often overlooked, if not lost on the way home, a newsletter invites attention. Of course, the more attractive the format, the more attention it will receive from parents and children.
- ☐ **A kindergarten handbook** may contain such useful information as school policies related to entrance age, size of classes, curriculum, special services, school calendar (including special activities for kindergarten parents throughout the year), school insurance, appropriate clothing and toys, radio stations that announce snow days, and information on the kindergarten newsletter.

- ☐ **Bulletin boards** featuring notices about parent meetings, guest speakers, community resources, child care, library story hours and other events should be where parents can see them. They may be limited to school and educational items or include more general interest information.
- ☐ **A parent place** provides a convenient location for parents to meet informally in small groups. This can be an effective way to let parents know they are welcome in school. A parent lounge, complete with some resource books on child rearing, comfortable chairs and a coffee/tea area can create a wholesome environment for all (Marion, 1973).
- ☐ **Informal contacts** should be initiated by the teacher. Teachers should occasionally make a phone call or send a brief note to parents who have difficulty attending meetings or who cannot accompany their children to school. They can send home a note along with a sample of art work or a story the child has dictated. A dittoed format that looks like a telegram might be used to jot down a special item and sent home to share the good news with the child's parents.
- ☐ **Home visits** can enhance communications. The visit might focus only on the relationship between the teacher and the child or have a purely social function—a way for the teacher to meet the whole family and for them to get acquainted with the teacher. Some parents appreciate the chance to meet with the teacher in their home, rather than always having to arrange to go to the school. When calling a parent, a tactful way to suggest a visit might be, "Would it be helpful if I came to your home?"
- ☐ **Parent discussion sessions** offer a time and a place for parents to meet informally with the teacher to discuss the kindergarten program and children's progress. Often parents can reinforce each other in child-rearing practices and become better acquainted, making it more interesting for them to work together for the benefit of their children.
- ☐ **Family of the week,** using the school bulletin board or newsletter, is a way to recognize families. Either format could include children's thoughts about their families, snapshots, all the family names spelled out in bold print, and appropriate information about each family as it relates to school activities. Every family should be featured at some time during the year.
- ☐ **Guest cards for grandparents** and neighborhood senior citizens extend a personalized invitation to special people who can, and should, play an important role in the school. These cards should also be available for other people—the school's neighbors, members of the town council and board of education, and others—who should be coming to see the school in action.
- ☐ **Parent buddies** pair new parents in the community with a parent buddy to welcome them, to accompany them to the first school meetings and to introduce them to others. This idea can be especially helpful for foreign-speaking parents when the "buddy" speaks their native tongue.
- ☐ **Welcome new families** by preparing a packet containing information about the school and local community. If resources permit, invite the parents to be guests at lunch followed by a tour of the school. The parent-teacher organization might undertake this project.
- ☐ **PTA/PTO meeting hours** can take advantage of the early evening for a new PTA meeting time. Start the meeting at six, bring a casserole and be home at 8:30 instead of 11 p.m. This might spark new membership and avoid the competition between the meeting and evening activities. The working parent might appreciate this time for a parent discussion session.

Good-News-O'Gram

Cheers! Johnny zipped his jacket all by himself today!

—K. Gasten

- ☐ **Congratulations—It's a future kindergarten boy/girl!** Have a school volunteer check the local newspaper for births in the school district. Send out cards telling of school services and materials available from the school system. Children can illustrate the cards.
- ☐ **Take advantage of opportune times,** such as election day, to invite citizens into school classrooms. Make them feel welcome. It's a great chance to let taxpayers see how their money is being spent.

Parent–teacher conferences. Another means of home-school communication that requires special attention is the parent-teacher conference. Parents and teachers need to review and discuss a child's program, how the child is growing, handling materials and functioning in a group, and what he or she enjoys and doesn't like in school. Without agreement about the child's strengths and weaknesses, parents and teachers cannot cooperatively guide the child's growth.

Gordon and Browne (1985) have suggested considerations for successful parent-teacher conferences:

- ☐ **Schedule conferences on a regular basis.** Parents and teachers should share some of the positive aspects of child growth and development and should not meet only to discuss a crisis.
- ☐ **Be prepared.** If you work with other teachers or paraprofessionals, discuss ahead of time any points they may want to include. Gather together any materials, notes and samples of the child's work that might illustrate a point you wish to make.
- ☐ **Select a quiet place, free from interruption.** If necessary, sign up for use of a conference room and make sure someone intercepts phone calls and other appointments.
- ☐ **Have a clear purpose.** Use written notes to keep focused on the key points you intend to cover.
- ☐ **Put parents at ease right away.** Offer parents a cup of coffee or share an amusing classroom anecdote. Informal, positive comments will help relax both parent and teacher.
- ☐ **Use up–to–date information and data.** When talking about a child's behavior, cite examples that occurred that morning or a few days ago. If possible, include examples of situations that occurred when the parent was present, e.g., "Timmy is very empathetic for a five-year-old, isn't he? That was so clear from the way you two were talking as you came through the door today."
- ☐ **Give parents a place to shine.** Express appreciation for what they do well. If they have shared a special talent with the class, comment on its impact on the children.
- ☐ **Ask. Don't tell.** Encourage parent input by asking open-ended questions. "How is that new bedtime arrangement working?" "Tell me more about Katie's eating habits." Relate parents' own knowledge and experiences with the child's school behavior, but acknowledge the difference between school and home, teacher and parent.
- ☐ **Learn how to listen.** Concentrate on what the parents are saying. Don't listen with half an ear while planning an appropriate response or comment before the parent has finished speaking.
- ☐ **Avoid blaming parents.** Keep the conversation based on mutual concerns and how to help each other. Consider alternatives together and make a plan of action. Discuss ways to check in with each other or provide for follow-through at school or home.
- ☐ **Know where and how to secure community resources and referrals.** Many parents do not know where to get a child's speech tested, or what an I.Q. test is, or where to secure family therapy. They may be unaware of after-school play groups, library story hours or children's museums. Be sure the school provides this information for parents who need it.

- ☐ **New teachers should find a good role model.** Ask experienced teachers to share their ingredients for success. When possible, attend a parent conference with one of them. Observe what works for them and learn from their experience. Ask them to critique your own performance after a conference.

The conference is not over when the parents leave. Teachers should keep careful records of the discussion, suggestions that have been made and follow-up activities that have been agreed upon.

Many kindergarten teachers like to refer to a written conference guide or written parent report. The ultimate purpose of a conference is for teachers and parents to explore and exchange their thoughts and feelings about a child in a relaxed and open-minded fashion. In an informal conference, parents can gain assurance of the teacher's genuine concern for their child.

Rudolph and Cohen (1984) conclude: "Good communication in a conference invariably affects the teacher's and parents' positive attitude toward the child and thus enhances the child's self-esteem."

Good parent conferences enhance the child's self-esteem.

Parent roles within the classroom

Parents can be involved in the curriculum and in the direct affairs of schools in a supportive capacity as school volunteers, paraprofessionals, tutors, clerical aides, library and lunchroom assistants, and as student club assistants.

There are two basic types of parent involvement. In the first, parents are paid participants, trained to assume roles in the school as paid teacher assistants. The second type of parent involvement is voluntary. There is evidence that such participation not only results in better parental understanding of and support for what the kindergarten teacher and the total school program are trying to achieve, but also leads to increased student achievement.

A parent volunteer sign-up sheet distributed during kindergarten orientation or at an early fall parent meeting would be useful in introducing the kindergarten parent volunteer program and giving the teacher an idea of the parents who are interested in participating. An example of a sign-up sheet appears on page 136. With over two-thirds of parents of school children working, emphasis should be on balancing roles for working and at-home parents.

Whatever the type of parental involvement, paid or voluntary, participants and the classroom will benefit if sufficient time is devoted to training people for the types of roles they will assume in the instructional program. By conducting a training workshop or series of workshops, teachers can make their expectations clear and assign specific responsibilities.

Before the training workshop, the teacher will need to prepare an outline of information to be covered and gather any necessary demonstrative or informative materials. Thus, teachers must have clearly in mind how they plan to use assistants or volunteers in the classroom if their service is to be productive.

The activities of the workshop might include the following:

- ☐ an overview of developmental expectations that are appropriate in working with kindergartners;
- ☐ demonstrations of appropriate ways to use instructional materials with children and explanations of the kindergarten's program goals and objectives;

- ☐ showing participants where they are to work in the room (or other school area), where materials are stored, and follow-up methods for sharing and recording activities and results for the teacher's information;
- ☐ Clarification of the roles of volunteers and assistants as models to young children:
  - —health: washing hands, covering sneezes, etc.
  - —manners: saying "please," "thank you," and the like
  - —body language: messages sent via facial expressions and gestures
  - —verbal skills: use of good speech with young children;
- ☐ Discussion of general school and classroom guidelines, self-discipline techniques, the importance of positive approaches and attitudes and how to respond to emergency situations, for example, fire drills, illnesses, injuries;
- ☐ The guidelines one wishes helpers to follow in preparing materials, such as durability, appropriate letter and numeral forms, the source of supplies, etc.; and
- ☐ A schedule of days, times, and types of volunteer roles with which parents might wish to become involved.

Parent Volunteer Sign-Up

☐ Volunteer in classroom	Day _____ Time _____
☐ Make materials at home	My special talent is_____ _____ _____ (sewing, woodworking, lettering, etc.)
☐ Parent Coordinator	Organize and motivate other volunteers
☐ Room Parent	Help with holiday parties and field trips.
☐ Substitute School Volunteer	Not every week, but when needed Day _____ Time _____
☐ Special Events	I have a special skill or knowledge I am willing to share (play a musical instrument, do arts/crafts, etc.). _____

Name _____

Address _____

Telephone _____

A teacher who invites volunteers to be part of the effort to help children learn must remember to:

- ☐ introduce the volunteers to the children in a positive way as people who are coming to help them;
- ☐ plan activities in advance and clearly explain the procedures and materials needed;
- ☐ know the volunteers' talents, special interests and liabilities so the teacher may utilize their services where they can best serve; and
- ☐ confer regularly with volunteers; good communication is essential to a positive experience for all—teacher, children and volunteers.

As parents begin to work in the classroom they will require some of the teacher's time and reinforcement in order to succeed. As they become acclimated, they will need less direction.

Activities for Parents and Other Volunteers

Some of the instructional activities that volunteers may do:

work with small groups on special projects;
listen to and record children's dictated stories;
help individual children to improve special skill areas;
help children look up information in the classroom or library;
prepare bulletin boards or display cases;
help a child complete activities missed when absent;
supervise children on a field trip; and
guide children's use of the computer.

Some noninstructional duties may include:

preparing audiovisual materials and equipment;
clerical tasks: typing, filing, cataloging;
checking and ordering supplies;
helping to supervise lunch;
collecting money for lunches and trips; and
accompanying a child to the library, nurse's office or other location.

(See also Chapter 3, "Duties of the Classroom Assistant.")

Encourage participants to contact you if they cannot come in. Let them know in a positive manner how much you count on their support. Providing recognition and appreciation to volunteers for a job well done is essential to a successful program. This appreciation can take several forms.

- ☐ Have a thank you party at the end of the year. Let the children plan it with you so it's their thank you, too.
- ☐ Give volunteers a certificate or award indicating the service they performed during the year. Distributing awards at a PTA or other school meeting would give added recognition.
- ☐ Publicize volunteers' contributions in the school and community newspapers.
- ☐ Use informal thank you notes and/or telephone calls throughout the year to encourage volunteers.

Do not feel constrained to use only school parents as volunteers. Many people without children in the school, for example, senior citizens and childless adults, would enjoy the contact of working with young children.

The home-school-community partnership can be realized when assistants and volunteers are involved effectively in the kindergarten program. See the section on staffing in Chapter 3 to gain an overall view of the teamwork necessary to a successful program.

Supporting family needs

"Being a parent is not an easy role. Many parents need help to become effective caregivers; more often, they are left to shift for themselves. There is growing awareness that parents need support and guidance" (Morrison, 1984, p. 413). Contemporary influences on society, including those discussed in Chapter 4, have resulted in the need for public schools to assist in developing strong family support systems. The implications for the schools seem evident; more appropriate programs for young children and new programs to provide better support services to parents are needed.

During the 1960s, the research of Benjamin S. Bloom and J. McVicker Hunt stressed the importance of the early years on the development of both intelligence and later school achievement. One implication drawn from this research was that "children who are reared in a home that is not intellectually stimulating may also lag intellectually behind their counterparts reared in a more advantaged environment" (Morrison, 1984, p. 54). Thus, it is important that teachers and administrators provide parents with the support, information and expertise they need to be successful in their parenting roles. Without good parenting, children are less likely to achieve their full potential.

There are many ways for teachers to help families. They may offer various kinds of support, from being a sympathetic listener to organizing support groups and seminars on parenting. Teachers can also help parents find other helping agencies and groups, such as Parents Without Partners or Big Brothers/Big Sisters. Through newsletters and fliers, teachers and administrators can provide parents with specific information on matters of general parental concern. Parents themselves often can provide the teacher with valuable information on good community sources for support services. The wise teacher listens carefully to suggestions given by parents during conferences and informal conversations.

Investing in school-supported parent education provides long-term benefits.

Parenting education. It is important for schools to accept responsibility for parenting education as an extension of their role in educating young children. Research clearly indicates that children from homes where education is highly valued and those who are given the positive stimulation to enhance their total development are more successful in school endeavors.

Many programs have been developed to help parents with child rearing. Some of these take the form of parent groups or structured courses and cover topics such as child development, nutrition, discipline and sibling rivalries. Examples of parent education programs are "Parent Effectiveness Training (PET)," developed by Thomas Gordon; "Systematic Training for Effective Parenting (STEP)," published by American Guidance Services; and "Education for Parenthood," begun by the former U. S. Office of Child Development (now Administration for Children, Youth and Families) in cooperation with the Office of Education. These programs are frequently offered by community agencies such as the YMCA or YWCA, local colleges or school systems' continuing education programs. Teachers should become aware of parenting programs in their area so they may refer interested parents.

Although structured programs can be very helpful, a few cautions are in order. Cost is one issue; some courses can be quite expensive. Their value also depends on the expertise and effectiveness of the leader. By becoming familiar with programs offered in the community, teachers and administrators can give parents some guidelines and direction in choosing a program that matches their specific needs.

Support for parenting can be accomplished in many ways.

Parenting education programs can also be provided through workshops, seminars, PTA/PTO programs and parent support groups sponsored by the school system. One advantage of local programs is that they can address the particular needs of the school's parents. For example, special programs can be developed for bilingual families, single parents, parents of special needs children, and others.

Collections of books, toys and other parenting and child development equipment and materials are often located in public libraries, where parents are given the opportunity to attend meetings to learn how to use these materials effectively with their children. Some kindergarten teachers invite parents into their classrooms, either individually or in groups, to learn how to support their child's play and school activities. In some situations, these objectives are reached in home visits.

> Parents, or any of us, learn in a variety of ways. We learn by **observing** a skillful person as he performs a job. We learn by **discussion,** raising questions, and expressing feelings and attitudes. We learn by **doing,** putting into practice what we have seen and discussed. When observation, discussion, and active participation take place under favorable conditions, they result in sound learning. A good parenting education program will include opportunities for all three kinds of activities. (Read and Patterson, 1980, p. 383)

Parent classroom participation of the type suggested in this chapter provides a firsthand opportunity for parents to develop better understanding of their child's peer relationships, to see the child working with another significant adult and to assimilate new approaches to interacting with their child. A follow-up discussion with the teacher is invaluable to the parents' understanding. This is an often overlooked avenue for parenting education.

Teachers can evaluate their own level of involvement in building parent-school partnerships by studying the checklist on page 140.

Family concerns. To help children succeed in school, teachers must often respond to special family concerns. At times, although the scope of the problem may fall outside the teacher's direct teaching role, teachers must nevertheless address the issue if only by helping the family or child to find services that can more directly resolve the problem. Some of the more common problems and issues families face are discussed in Chapter 4.

To prepare to help families with special needs, teachers can compile a file of special community and/or school services. This information file should include the kinds of services, who provides them, what they can do, professional qualifications, procedures for contacts, and costs.

The school and the community

Parents and schools can gain much for their children by becoming more aware of the many valuable resources available in their communities and by working to achieve a close partnership.

Swick, Hobson and Duff in their book, *Building Successful Parent-Teacher Partnerships* (1979), suggest the following objectives for building school-commmunity partnerships:

- ☐ Parents and teachers can work together to keep the community informed about school programs. Joint efforts in developing public information efforts such as newsletters and television messages can enhance and strengthen school-community relations. Example: Schools in towns with cable television access channels often use this vehicle to provide informational programming about education to the community.
- ☐ Parents and teachers can develop a variety of projects, both educational and social, that join the school and community in efforts to enhance the life of the children and young people in the community. Example: Some towns extend the schools' services to senior citizens and others by creating "community schools." Participation in school programs helps citizens of all ages better understand what is happening in schools.
- ☐ Parents and teachers can visit and cooperate with community agencies and service groups on joint projects that promote quality educational programs for children and families. Example: Development of comprehensive child care is one possible project for the entire community. Many parents today also need extended child care beyond the hours provided in school. Some schools have worked out agreements with separate community groups and with child-care providers to make this service available, whether in the school facility or by providing transportation to the appropriate location.

Self-Evaluation of Teacher Efforts to Involve Parents

Do you:

- ☐ seek and get administrative and special staff support and cooperation with any parent involvement project?
- ☐ greet parents by name and engage in casual, friendly conversation whenever they bring a child to school or take him or her home?
- ☐ keep folders for children's work, then send samples of children's work home?
- ☐ send home notes (with good as well as not-so-good news)?
- ☐ telephone parents to invite them to school programs?
- ☐ keep a file card box of "community resources"?
- ☐ provide a welcome, comfortable area in which parents can meet and work?
- ☐ co-plan with parents a formal program of meetings throughout the school year?
- ☐ seek parents' help with special projects?
- ☐ schedule conferences on a regular basis, not only when a child has a problem?
- ☐ schedule parent conferences during late afternoon and evening hours or at other times convenient to parents?
- ☐ designate "Room Parents" or a "Parent Coordinator" who can organize the other parents when necessary?
- ☐ schedule activities that respect parents' cultural differences and expectations?
- ☐ make a special effort to involve fathers?
- ☐ conduct conferences and meetings in jargon-free language?
- ☐ help to produce a "Kindergarten Handbook"?
- ☐ help to produce a kindergarten newsletter?

The need for a strong home-school-community relationship has never been greater. Problems that families and schools face can be solved with partnership efforts. The partnership among the home, the school and the community must be a strong one if the kindergarten program is to be most effective.

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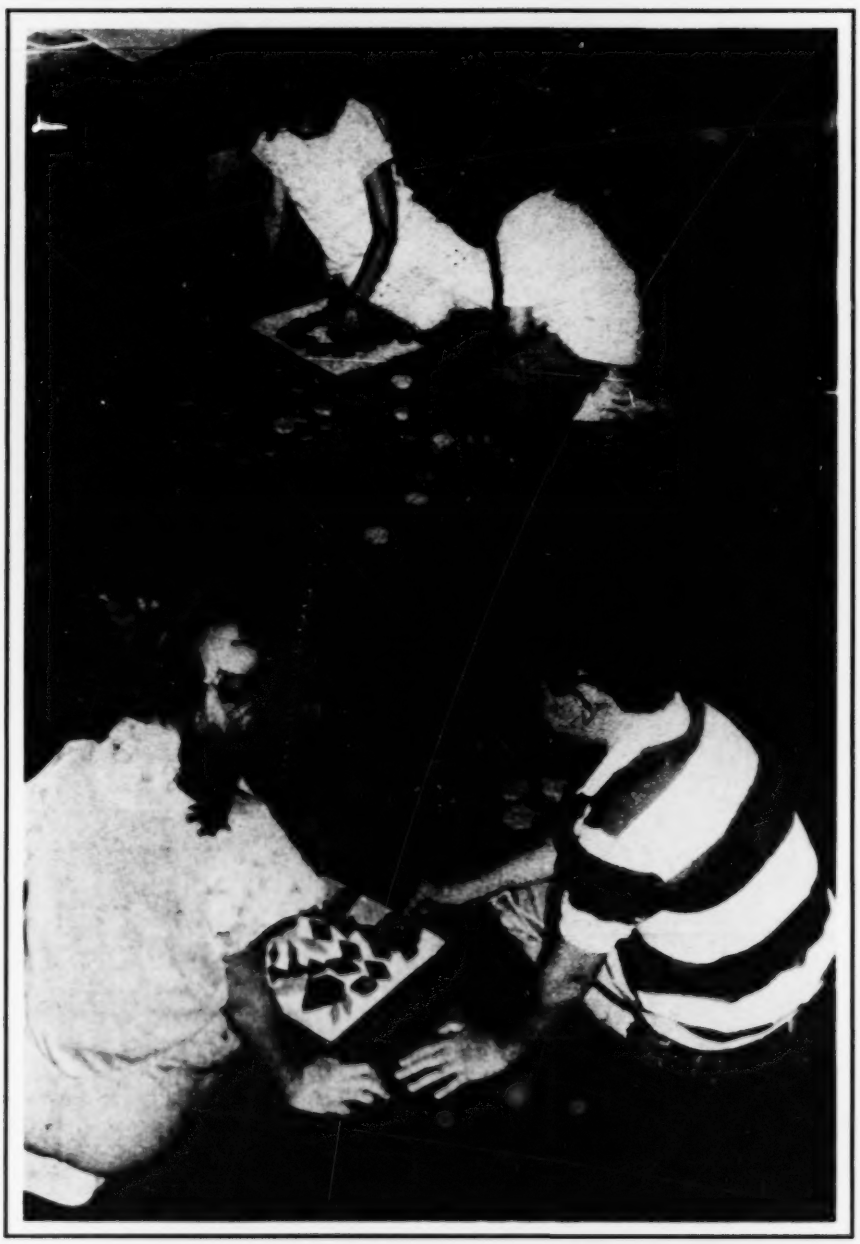
The Early Childhood Continuum

8



The Early Childhood Continuum 8

Increasing numbers of young children today are participating in early childhood programs prior to enrollment in kindergarten. For many young children, the kindergarten teacher is not the "first teacher" and the kindergarten class is not the first group experience, as the U.S. Department of Health and Human Services points out in a 1987 publication entitled *Easing the Transition from Preschool to Kindergarten—A Guide for Early Childhood Teachers and Administrators*. The following discussion of the transition is adaped from that document.

Transition from preschool to kindergarten

Because learning is a continuous process, the transition from preschool to kindergarten is important for all those who educate and care for young children. Programs in prekindergarten classes, nursery schools, child care centers, Head Start and family day-care homes should be built on the learning and development that have taken place in the home and through earlier educational experience. (Glicksman and Hills, 1981)

It is important to link subsequent steps in children's education to their earlier experiences and to involve the parent in these activities. (Chapel Hill, 1986).

There are four critical elements or keys to the successful transition of young children as they move from preschool to kindergarten: program continuity, communication, preparing the children and involving the parents. Education staff can facilitate the transition for both the children and their families.

Providing program continuity

The move between preschool and kindergarten is made easier if both programs are focused on the individual developmental needs of the children. The commonalities between the way four- and five-year-olds learn and the range of developmental levels represented in each program call for similar learning environments and teaching strategies.

If both programs are developmentally appropriate, the transition will be facilitated. Children will be more likely to find similar activities that allow them to begin kindergarten confident that they have the ability to accomplish certain tasks. Knowing what is expected adds to their self-confidence, encourages them to try new activities and facilitates continuity in their development.

As children enter kindergarten, they:

- ☐ have more ability to expand beyond their immediate experiences of self, home and family and to develop interests in the community and world outside;
- ☐ show increased ability to use motor skills, to pay attention for longer periods of time, and to play and plan cooperatively; and
- ☐ display a growing interest in symbols, including written language and a written number system. (Bredekamp, 1986)

Maintaining communication

Administrators in both preschool and kindergarten can set the stage for a successful transition by supporting ongoing communication and cooperation among early childhood teachers. Preschool and kindergarten staffs can increase educational program continuity by getting to know each other, becoming comfortable enough with each other to share information about their programs and to plan a smooth transition. If there are opportunities for teachers and staff to ask questions and talk openly about themselves and their programs, the foundation will be laid for effective cooperation during the transition. (Glicksman and Hills, 1981)

Opportunities for formal and informal contact should be provided throughout the year. The exchange of accurate and unbiased information about programs is important. Teachers of preschool children are understandably proud of their programs and have both a professional and personal interest in the young children enrolled. It may be difficult to "let them go" to what may seem like a more impersonal institutional setting. On the other hand, kindergarten teachers are equally proud and dedicated; they strive to plan and carry out a program based on community expectations, school goals and objectives, and the children's individual needs. Although preschool and kindergarten teachers may be following different career paths, honest acceptance of each other's professionalism and commitment is essential to the transition process. (Glicksman and Hills, 1981)

It is essential to the transition process that preschool and kindergarten teachers honestly accept each other's professionalism and commitment.

Since preschool teachers may have to interact with several "receiver" schools and kindergarten teachers may have to contact several "feeder" programs, it may be helpful to establish a community-wide transition committee.

- ☐ Preschool and kindergarten administrators can initiate opportunities for communication and exchange among teachers, including informal visits to each other's programs to meet the staff, and begin planning for the transition.
- ☐ Through informal contact, or through the transition committee, activities, including joint kindergarten registration, workshops and materials for parents, and other activities that will facilitate the transition process, can be planned.
- ☐ Teachers can visit each other's classrooms during the school year to make observations.
- ☐ Kindergarten teachers might be asked to sit on the preschool board or preschool teachers might be invited to join in meetings of the school parent-teacher association.
- ☐ Joint professional development workshops can be developed which focus on transition as well as other issues facing early childhood educators.
- ☐ Preschool administrators can write letters to receiving public schools in the spring, listing the names of incoming children and communicating information about their preschool programs.
- ☐ Arrangements can be made between preschool and kindergarten staff to provide special information and assistance for non-English speaking parents as their children move on to a new program.
- ☐ Preschool staff can discuss the transfer of specific records to the school. The type of records available will vary. Some programs, such as Head Start or programs serving children with special needs, may already have specific arrangements for the transfer of records. The most important concern in this area is to provide parents with their full rights to privacy regarding the records of their children.

Preparing children for transition

Never before has early education reached as many children as it does today. Children entering kindergarten may have attended full-day or half-day child care for one or more years. Because of the variety of programs available, children can enter kindergarten with vastly different experiences. In turn, kindergarten programs are diverse in purpose, structure and schedule. (Glicksman and Hills, 1981)

Despite the variety of previous experiences, all children need to be accepted at their own developmental level. Preparing children for the transition to kindergarten does not mean "getting them ready" by focusing on a narrow range of academic skills, drilling on new rules, or retaining them in preschool for another year. School is a place where children and parents expect to find opportunities for growth and development from whatever starting point the child brings to the new setting. (Nebraska Department of Education, 1984)

Children need to know what is expected of them by adults in the new program and to have several opportunities to become familiar with the new environment. Preparation for what is new can include discussions, stories, games, dramatic play and field trips.

Children need to know what is expected of them.

Involving parents

A joint effort by school and home is needed to effect a smooth transition. This means that continuity is important for the parents as well as the children. For the parent, the preschool may be a familiar family support system where there has been frequent contact with the staff. The kindergarten may represent a less familiar environment with a different type of program for children and families.

Many parents are actively involved in their children's preschool program. Studies indicate that such involvement contributes to the success of the educational program. Parents need encouragement to continue to help their children feel competent as they move on to kindergarten. Parents can promote confidence in their children by conveying a positive attitude about the new school.

Parents also need support to work through the effect of changing programs on their daily lives. For example, locating child care that can be used in conjunction with the kindergarten may be a critical need for some families.

Kindergarten entry and placement

The following position statement (ending on page 155) of the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) is consistent with the position of this guide. The statement, *Unacceptable Trends in Kindergarten Entry and Placement*, is used with permission.

> Over the past several years members of NAECS/SDE have become increasingly alarmed at emerging attitudes and practices which erode children's legal rights to enter public school and participate in a beneficial educational program. Dramatic changes in what children are expected to do in kindergarten are resulting in well-intentioned interventions which are often inequitable, ineffective, and wasteful of limited public resources.

Many classroom teachers report that they have little or no part in decisions which determine curriculum and instructional methodology. Instead, those decisions are made by administrators, influenced by public demand for more stringent educational standards and the ready availability of commercial, standardized tests.

Additional pressure on kindergarten programs sometimes comes from primary teachers, who themselves face requirements for more effective instruction and higher pupil achievement. They argue that the kindergarten program should do more. In addition, a growing number of states and localities are raising the age of kindergarten eligibility, providing further evidence of changed expectations for kindergarten education and kindergarten children.

A number of highly questionable practices have resulted from the trend to demand more of kindergarten children. These practices include (1) inappropriate uses of screening and readiness tests; (2) denial or discouragement of entrance for eligible children; (3) the development of segregated transitional classes for children deemed unready for the next traditional level of school; and, (4) an increasing use of retention.

Two predominant considerations underlie these practices. The first is a drive to achieve homogeneity in instructional groupings. Some educators believe that instruction will be easier and more effective if the variability within the class is reduced. There is, however, no compelling evidence that children learn more or better in homogeneous groupings. In fact, most of them learn more efficiently and achieve more satisfactory social/emotional development in mixed-ability groups.

The second is a well-intentioned effort to protect children from inappropriately high demands on their intellectual and affective abilities. When parents are counseled to delay a child's entry or when children are placed in "developmental" or "readiness" classes to prepare for kindergarten or "transitional" classes to prepare for first grade, it is often because the school program is perceived to be too difficult for those children. In this view, children must be made ready for the program, in contrast to tailoring the program to the strengths and needs of the children.

Retention can threaten some areas of childhood development.

Delaying children's entry into school and/or segregating them into extra-year classes actually label children as failures at the outset of their school experience. These practices are simply subtle forms of retention. Not only is there a preponderance of evidence that there is no academic benefit from retention in its many forms, but there also appear to be threats to the social-emotional development of the child subjected to such practices. The educational community can no longer afford to ignore the consequences of policies and practices which: (1) assign the burden of responsibility to the child, rather than the program; (2) place the child at risk of failure, apathy toward school, and demoralization; and, (3) fail to contribute to quality early childhood education.

Therefore, NAECS/SDE calls for policymakers, educators, and all concerned about young children to use the following principles for kindergarten entry and placement:

☐ **KINDERGARTEN TEACHERS AND ADMINISTRATORS GUARD THE INTEGRITY OF EFFECTIVE, DEVELOPMENTALLY APPROPRIATE PROGRAMS FOR YOUNG CHILDREN...**
...THEY DO **NOT** YIELD TO PRESSURE FOR ACCELERATION OF NARROWLY-FOCUSED, SKILL-BASED CURRICULA.

☐ **CHILDREN ARE ENROLLED IN KINDERGARTEN BASED ON THEIR LEGAL RIGHT TO ENTER...**
...FAMILIES ARE **NOT** COUNSELED OR PRESSURED TO DELAY ENTRANCE OF THEIR CHILDREN FOR A YEAR BY KEEPING THEM AT HOME OR ENROLLING THEM IN PRESCHOOL.

Children have a legal right to enter kindergarten programs.

☐ **KINDERGARTEN TEACHERS AND ADMINISTRATORS ARE INFORMED ABOUT MEASUREMENT STRATEGIES AND TECHNIQUES AND ARE INVOLVED RESPONSIBLY IN THEIR USE...**
...THEY DO **NOT** DEFER MEASUREMENT DECISIONS SOLELY TO PSYCHOMETRICIANS AND TEST PUBLISHERS.

☐ **ANY TESTS USED AT KINDERGARTEN ENTRANCE ARE VALID, RELIABLE, AND HELPFUL IN INITIAL PROGRAM PLANNING AND INFORMATION-SHARING WITH PARENTS...**
...THEY ARE **NOT** USED TO CREATE BARRIERS TO SCHOOL ENTRY OR TO SORT CHILDREN INTO WHAT ARE PERCEIVED TO BE HOMOGENEOUS GROUPS.

☐ **RETENTION IS REJECTED AS A VIABLE OPTION FOR YOUNG CHILDREN...**
...IT IS **NOT** PERPETUATED ON THE BASIS OF FALSE ASSUMPTIONS AS TO ITS EDUCATIONAL BENEFIT.

☐ **ALL CHILDREN ARE WELCOMED—AS THEY ARE—INTO HETEROGENEOUS KINDERGARTEN SETTINGS...**
...THEY ARE **NOT** SEGREGATED INTO EXTRA-YEAR PROGRAMS PRIOR TO OR FOLLOWING REGULAR KINDERGARTEN.

Support for the Statements of Principle

☐ **KINDERGARTEN TEACHERS AND ADMINISTRATORS GUARD THE INTEGRITY OF EFFECTIVE, DEVELOPMENTALLY APPROPRIATE PROGRAMS FOR YOUNG CHILDREN...**
...THEY DO **NOT** YIELD TO PRESSURE FOR ACCELERATION OF NARROWLY-FOCUSED, SKILL-BASED CURRICULA.

Professional integrity must be asserted in the service of best practice for young children.

Most of the questionable entry and placement practices that have emerged in recent years have their genesis in concerns over children's capacities to cope with an increasingly inappropriate curriculum in the kindergarten. External pressures in recent decades have so changed the focus of the curriculum in kindergarten that it is often difficult to distinguish between curriculum and methodology in classrooms for young children and those of later elementary grades.

Research about the capabilities of young children has been misunderstood.

Several factors have interacted to bring about those changes. Research about the capabilities of young children has been misrepresented and misunderstood. A popular belief has developed that children are smarter now primarily because of exposure to television and because so many go to preschool. A rather large number of overzealous parents have also contributed to the problem by insisting that their children be "taught" more and expecting children to learn to read in kindergarten. This parental view of kindergarten has reinforced the notion that didactic methods of teaching, many of questionable value even for older elementary children, should be accepted practice in kindergarten.

Too often teachers are told, or they believe, that it is not enough to set the stage for learning by preparing a rich and varied environment and encouraging children to engage in activities which carry their development forward. In too many kindergartens, rich creative experiences with real materials which formerly provided the core of kindergarten have now been replaced with abstract curriculum materials requiring pencil and paper responses. Often these are routinely tied to tightly sequenced and often inappppropriate grade-level lists of expectations for skill acquisitions in each of the subject areas. Ironically, children who are ready to learn to read are more likely to advance as far as they are able in an active learning classroom.

Children who are ready to read are more likely to advance in an active learning environment.

(Bredekamp, 1987; Elkind, 1986; Nebraska State Board of Education, 1984; Goodlad and Anderson, 1987; Goodman, 1986; Hills, 1987a; Katz, et al., 1987; Kamii, 1982; Shipman, 1987; Spodek, 1986.)

☐ **CHILDREN ARE ENROLLED IN KINDERGARTEN BASED ON THEIR LEGAL RIGHT TO ENTER...**
...FAMILIES ARE **NOT** COUNSELED OR PRESSURED TO DELAY ENTRANCE OF THEIR CHILDREN FOR A YEAR BY KEEPING THEM AT HOME OR ENROLLING THEM IN PRESCHOOL.

Serious negative consequences attend the rising trend to discourage some parents from enrolling their age-eligible children in kindergarten. The dilemma is that the very children being counseled out of school are the ones who, if provided a flexible, appropriate kindergarten curriculum, could benefit the most. The "gift of time" that many parents have been persuaded to give children by delaying school entry can result instead in denying them opportunities for cognitive growth through social interaction with their age-mates. It also implies that children can fail at school even before they begin.

Public schools cannot ethically select some children who are eligible under the law and reject others. Children subjected to delayed entry disproportionately represent racial and linguistic minorities, low income children, and males. Denial of entrance to school, blatant or subtle, increases the disparity between social classes and could be construed as a denial of a child's civil rights. It also creates an equity problem since it places the financial burden for alternative schooling on parents.

Curiously, states with quite different entry cutoff dates perceive that the same problems exist. While there is some evidence that older children tend to do better initially, the differences due to age are small and disappear with time. The specific entry date is irrelevant and recent legislative action in several states to raise the entry age will not accomplish what is intended. The quality and appropriateness of the kindergarten curriculum should be the focus of the reform. Age is the only nondiscriminatory entry criterion.

'Age is the only nondiscriminatory entry criterion.'

No matter where the kindergarten entry date is set, there will always be a younger group of children within a given classroom. It is both unfair and unreasonable to establish expectations for achievement on what the oldest children can do. Delaying entry has been shown to contribute to greater variation among children in the same class—in chronological age, size, motor ability, experiential backgrounds, and other learning characteristics.

While educators should be sensitive to and respectful of the wishes of some parents to postpone their children's initiation into the larger world of school, school personnel also have the responsibility to assure that parents do not make this decision based on anxiety over the suitability of the kindergarten program for their child.

(Bredekamp, 1987; Katz, 1987; Nebraska State Board of Education, 1984; Shipman, 1987; Shepard and Smith, 1985; Smith and Shepard, 1987)

☐ **KINDERGARTEN TEACHERS AND ADMINISTRATORS ARE INFORMED ABOUT MEASUREMENT STRATEGIES AND TECHNIQUES AND ARE INVOLVED RESPONSIBLY IN THEIR USE...**
...THEY DO **NOT** DEFER MEASUREMENT DECISIONS SOLELY TO PSYCHOMETRICIANS AND TEST PUBLISHERS.

Measurement is a process of determining whether particular characteristics are present in an individual or a program and the amount or extent of them. Standardized tests are one form of measurement. Measurement can also be accomplished through teacher observation, checklists, and questionnaires.

Because testing is so prevalent, many teachers are faced with challenges for which their training and experience have left them unprepared. Today's early childhood educators must be able to: (1) recommend appropriate measures to be used in the beginning of school years; (2) interpret and use the information which the measures produce; (3) communicate to other educators and parents what test information means about student progress; and, (4) prevent and/or correct misuses of testing.

To fulfill these responsibilities requires that early childhood educators become informed about the functions of tests and measures, their properties, and the legitimate uses of test data. Tests which fit one purpose adequately may be totally unsuited to another. Most importantly, early educators must know about the various forms of assessment which can supplement or replace test scores.

As tests have increased in popularity, instances of their abuse have increased. Abuses occur when:

- ☐ Tests are used for purposes for which they were not designed (e.g., screening tests used to diagnose a child's development);
- ☐ Tests do not meet acceptable levels of quality (e.g., no reliability or validity studies are available);
- ☐ A test is used as the sole basis for a decision about placing a child in a specific educational program;
- ☐ A test or tests determine curricular objectives; and
- ☐ Teachers lack sufficient training and experience in the use of tests.

(Bredekamp, 1987; Hills, 1987b; Meisels, 1987; NAEYC, 1987; *Standards for Educational and Psychological Testing*, 1985)

- ☐ **ANY TESTS USED AT KINDERGARTEN ENTRANCE ARE VALID, RELIABLE, AND HELPFUL IN INITIAL PROGRAM PLANNING AND INFORMATION-SHARING WITH PARENTS...**
  ...THEY ARE **NOT** USED TO CREATE BARRIERS TO SCHOOL ENTRY OR TO SORT CHILDREN INTO WHAT ARE PERCEIVED TO BE HOMOGENEOUS GROUPS.

Kindergarten testing is a common practice in today's public schools. Unfortunately, screening and readiness tests are being used interchangeably to determine the educational fate of many young children before they enter kindergarten. Developmental screening tests broadly and briefly tap developmental domains and are designed primarily to predict future school success—to find children who, after further assessment, appear to be good candidates for selective programs. As such, they must contain predictive validity as well as the accepted standards for all tests of reliability, validity, sensitivity, and specificity. Screening procedures should include vision, hearing, and health assessments.

Readiness tests assist in making instructional decisions about each child.

Readiness tests, by definition and statistical design, do not predict outcomes and therefore cannot be substituted for such purposes. These tests assist teachers in making instructional decisions about individual children. Children who do poorly on readiness tests are likely to benefit most from the kindergarten curriculum. The paradox is that if readiness tests are substituted for developmental screening measures, these childen are being channeled away from the regular classroom.

A major problem with kindergarten tests is that, of the many available, relatively few meet acceptable standards of reliability and validity. The probability of a child being misplaced based on several widely-used tests is fifty percent—the same odds as flipping a coin. The burden of proof is on educational and testing professions

to justify the decisions they make in the selection or creation of screening instruments. Otherwise, educators are left speculating about what the results mean. Flawed results lead to flawed decisions and wasted tax dollars.

Even when credible, appropriate tests are selected, kindergarten screening and developmental assessment are still uncertain undertakings because:

- ☐ Normal behavior of young children is highly variable.
- ☐ Young children are unsophisticated in generalizing from one siutuation to another and are novices in testing behaviors.
- ☐ Young children may not be able to demonstrate what they know and can do clearly because of difficulties in using pencils or other markers, reading, writing, responding to certain abstract symbols.
- ☐ Separation anxiety, the time of day the test is administered, and rapport with the examiner can all distort results, especially with young children.

Childhood backgrounds may affect testing outcomes.

Moreover, children entering school come from markedly differing backgrounds, which have reinforced some behaviors more than others. Assessment procedures must not be used to penalize children at school entry for responses that have heretofore been appropriate for them or which they have not yet had a chance to develop. No screening or assessment can substitute for an observant, competent, caring teacher and a responsive curriculum.

Parents have a unique perspective about their child's development and learning history. For this reason, their knowledge about the behavior and attainments of their children is invaluable to teachers. Any full assessment of a child's progress must take the parent's information into account. Moreover, parents have a moral and legal right to be informed about the basis for educational decisions affecting their children.

(Hills, 1987b; Meisels, 1987; NAEYC, 1987; NAEYC, 1986; Shepard and Smith, 1985; Shepard and Smith, 1986)

- ☐ **RETENTION IS REJECTED AS A VIABLE OPTION FOR YOUNG CHILDREN...**
  ...IT IS **NOT** PERPETUATED ON THE BASIS OF FALSE ASSUMPTONS AS TO ITS EDUCATIONAL BENEFIT.

The practice of retention as a means of reducing school failure is controversial among educators. Although research does not support the practice, many educators do. While it is true that teachers do see children they have retained making progress, it is also true that they have no opportunity to see how well the children might have progressed had they been promoted.

Control-group studies which are structured to measure this comparison come down clearly on the side of promotion. Students recommended for retention but advanced to the next level end up doing as well or better academically than non-promoted peers. Children who have been retained demonstrate more social regression, display more behavior problems, suffer stress in connection with being retained, and more frequently leave high school without graduating.

The evidence does not support the use of retention. The current methodology used in selecting students for retention makes it impossible to predict accurately who will benefit. Pro-retention policies as a strategy for establishing rigorous academic standards are likely to be self-defeating. The lowered expectations parents and teachers develop decrease the probability that retained children will attain their potential. Retention policies should be highly suspect given the lack of demonstrated effectiveness and prevalent bias against certain groups of children.

(Goodlad and Anderson, 1987; May and Welch, 1984; Norton, 1983; Plummer, et al., 1987; Shepard and Smith, 1985; Shepard and Smith, 1986; Smith and Shepard, 1987)

☐ **ALL CHILDREN ARE WELCOMED—AS THEY ARE—INTO HETEROGENEOUS KINDERGARTEN SETTINGS...**
...THEY ARE **NOT** SEGREGATED INTO EXTRA-YEAR PROGRAMS PRIOR TO OR FOLLOWING REGULAR KINDERGARTEN.

The responsibility of the school is to accept children with the aptitudes and skills they bring. The function of the schools is to help the child develop in all areas. The expectation is not that all children enter with prerequisite skills.

Extra-year programs often increase the risk of failure for some children.

The dramatic growth of extra-year programs represents an attempt by the educational system to cope with an escalating kindergarten curriculum and the varied backgrounds of entering children. However, these programs often increase the risk for failure for children who come to school with the educational odds against them. Selection and placement in "transitional," "developmental," or "readiness" classes often brand the children as failures in their own eyes and those of parents, peers, and teachers.

Children placed in segregated programs often encounter lowered expectations from parents and teachers, have fewer positive peer role models for success and confidence, and lack access to regular curriculum. For all of these reasons, their future progress tends to be more limited and many of them continue in the slow track throughout their schooling.

Heterogeneous class groupings are more likely to encourage growth for lower-functioning children than are homogeneous ones. Experiences within the regular classroom should be organized so that differences among children are valued rather than being viewed as a barrier to effective instruction. Flexible peer groupings, multi-age and ungraded structues, and cooperative learning are some alternatives that can foster learning and self-esteem by valuing the gifts and talents of all children.

(Bredekamp, 1987; Goodlad and Anderson, 1987; Gredler, 1984; Slavin, 1986)

A Call for Action

The primary consideration should be what is best for young children, not institutions or professionals. The case has been made that children do not benefit from the traditional form of retention or its new guise as delayed entry or extra-year classes. Children

are placed in double jeopardy when they are denied, on highly questionable premises, the same educational opportunities as their peers.

The belief in the pure maturational viewpoint underlies many of the deleterious practices described in this paper. The notion that children unfold on an immutable timetable, however appealing, cannot be overgeneralized to intellectual, social, linguistic, and emotional development. A responsive, success-oriented kindergarten curriculum and teacher are bound to have a powerful effect on young children's learning. Children come to school as competent, naturally motivated learners. One of the school's critical responsibilities is to ensure that these characteristics are maintained and strengthened, not destroyed.

The [issue is] not whether to keep children with age-mates. (Heterogeneous multi-age grouping can stimulate children's development.) It is whether we can continue to uphold practices and programs predicated on failure. Failure by any name does not foster success.

Schools must make adjustments to respond to young children's needs.

What adjustments do schools need in order to make education more responsive to the needs of young children? Reducing class size, making the curriculum less abstract and therefore more related to children's conceptual development, and insisting that only the most appropriately trained, competent, and child-oriented teachers are placed in kindergarten programs are among better means to achieving the educational goal of success for all students.

Limited federal, state, and local resources are being used inappropriately as a result of well-intentioned but misdirected policies. However, simply to stop retention and extra-year classes will not assure success for all children. NAECS/SDE recommends that attention and resources be diverted from ineffective policies and directed toward seeking long-term lasting cures for the ills of the kindergarten/primary curriculum.

A consensus is needed among the educational community and families that only those practices beneficial to young children will be permitted. We can have equitable, excellent, and economical public education for all of the nation's kindergarten children.

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The entry process

School systems have developed a vast array of entry procedures to assist in locating and registering kindergarten-eligible children and in introducing them and their families to the school and the kindergarten program. It is essential that local policies be reviewed periodically with regard to the kindergarten entry process in order to ensure that modifications will be made which best meet the needs of children.

Components of the kindergarten entry process, identified in *Kindergarten Entry Policies in Your Community—A Self-Evaluation Checklist* (Schaffer and Shuster, 1982), include:

Data collection. Basic data on entering kindergarten population is needed for determining kindergarten entry policies.

Determination of who develops and who conducts the kindergarten entry process. The inclusion of parents, professionals who have already dealt with the children, and those receiving the children in their program, will ensure a more complete knowledge of each child's growth and development as well as providing a basis for planning continuity of experiences.

Initial contact with the family. This should be the beginning of a positive relationship between families and the school.

Kindergarten "testing." Pretesting of children prior to entry is a questionable policy which needs to be examined in reference to equity, effect on children and parents, and ethical utilization of results.

Parent orientation. Time spent helping parents to understand procedures and programs prevents misunderstandings between school and home, promotes a good adjustment for the child and establishes education as a cooperative venture of parents and educators.

Coordination with preschool. Ongoing cooperation between preschool and public school personnel facilitates effective programming for young children and their families and promotes developmental continuity.

Child's school visit. A visit to the school in the spring can provide realistic expectations for the parent and entering kindergarten child.

Teacher contact. Establishing trust and rapport with the entering kindergarten child and family can be greatly supported through the direct, personal communication of the kindergarten teacher.

Fall kindergarten entry. This is a time to allow children to become comfortable with the new environment, and to provide opportunities to observe each child, supporting knowledgeable program planning based upon the current individual needs of the child.

Implementation of the kindergarten curriculum. Providing time in the fall for the staff to observe and assess the entering kindergartners sets the stage for the continuous development of the kindergarten program based upon ongoing observation and assessment process.

The source of the above definitions, *Kindergarten Entry Policies in Your Community—A Self-Evaluation Checklist* (1982), also discusses policy, current and proposed, and is an excellent source for the development or revision of the kindergarten entry process.

Connecticut laws governing kindergarten entry

Connecticut General Statutes Sec. 10-15. Towns to maintain schools. Public schools including kindergartens shall be maintained in each town for at least one hundred eighty days of actual school sessions during each year....

Equal access to kindergarten programs is the law in Connecticut.

Connecticut General Statutes Sec. 10-15c. Discrimination in public schools prohibited. School attendance by five-year-olds. The public schools shall be open to all childen five years of age and over and each such child shall have, and shall be so advised by the appropriate school authorities, an equal opportunity to participate in the activities, programs and courses of study offered in such public schools, at such time as the child becomes eligible to participate in such activities, programs and courses of study, without discrimination on account of race, color, sex, religion or national origin; provided boards of education may, by vote at a meeting duly called, admit to any school children under five years of age or may exclude children who will not attain the

age of five years until after the first day of January of any school year. [*That is to say, a child must be five years of age by January 1 of that school year in order to be eligible for school attendance. Only by provision of a local board of education can an early entrance policy be established which allows for a child younger than five years of age by January 1 to enter school, unless a program is mandated by the Planning and Placement Team process. The school entry date is established by law. Local school districts cannot change that date of entry to another month or day. A child whose birth date is January 1 is eligible to attend school.—Ed.*]

Connecticut General Statutes Sec. 10-16. Length of school day. The school day shall consist of not less than four hours of actual school work, except that in nursery schools and kindergartens a continuous session of two and one-half hours may be considered as a school day, provided any school session consisting of at least two hours but less than four hours of actual school work may be counted as half a school day...

Developmental screening

The chief use of developmental screening is to identify handicapped preschoolers and to begin serving them by age three.

> The school is responsible for identifying handicapped preschoolers from birth and providing programs to serve their needs at age three. This responsibility necessitates initiating the screening process at a much earlier time than during kindergarten registration. The use of a screening instrument to identify handicapped children at this time is not appropriate except for those children who were not screened earlier.
>
> Schaffer and Schuster, 1982, p. 15

If developmental screening has been provided earlier, as recommended, it will not be included in the kindergarten-entry process. When used with children about to enter kindergarten, developmental screening is a brief, initial procedure in the assessment process to (a) identify those children who may need a more intensive level of diagnostic assessment and who may be at risk of having handicapping conditions; (b) identify a child's abilities to acquire skills in the areas of speech, language, reasoning, fine motor, gross motor and personal/social development; (c) gather information regarding vision and hearing; (d) identify children who may require modifications in kindergarten programming, and (e) identify children who may have behavior and health conditions like chronic illness or allergies that will have an impact on educational functioning.

If developmental screening instruments are to be used at kindergarten entry, they should (as noted by Meisels, 1985):

- ☐ offer brief, initial procedures to identify children who may be in need of a more intensive diagnostic assessment;
- ☐ sample the domain of developmental tasks rather than the domain of specific academic readiness accomplishments;
- ☐ focus on development in a wide range of areas (speech, language, cognition, perception, affect, gross and fine motor); and
- ☐ include data concerning the normative development and the reliability and validity of the instrument.

In addition, a developmental screening instrument must be selected carefully to assure that it is sensitive and normed to the cultural and linguistic backgrounds of the children to whom it is administered.

If a school district plans to use developmental screening as part of the kindergarten-entry process, components to consider include: (a) personnel to coordinate the screening process; (b) selection of a valid and reliable screening instrument; (c) identification of the kindergarten population and recruitment strategies; (d) native languages and cultural backgrounds of the kindergarten population; (e) training of the developmental screening team, kindergarten teachers, related personnel and administrators; (f) a suitable location with child- and adult-size furnishings; (g) scheduling management; (h) integrating parental input and that of significant others, such as primary care givers, preschool educators and physicians; (i) communication with the community in announcing procedures, dates, information requested of parent, such as immunization records and proof of birth date; (j) referral process when screening results call for further assessment; (k) evaluation of the screening process and (l) length of the entry process for the young child.

Informal processes—observations, developmental checklists, anecdotal records by family, care giver, preschool and kindergarten teachers and other program personnel—should be given primary consideration.

Unlike diagnostic assessment, developmental screening should not be used to label children, to determine educational placement in a specific kindergarten program or classroom, to determine intervention strategies or to "counsel out" age-eligible children from school entry. It should, however, alert one to the need for further diagnostic assessment.

Developmental screening should alert educators to the need for further diagnostic assessment.

Diagnostic assessment

When developmental screening alerts the examiners that children who have handicapping conditions or are at risk of having handicapping conditions, diagnostic assessment should follow promptly. The assessment is performed by a multidisciplinary team of professionals and is governed by Connecticut General Statutes Section 10-76d. A referral to the local Planning and Placement Team (PPT) should be made for the purpose of specific diagnostic assessment. Developmental screening results and information from other sources should guide the diagnostic assessment process in identifying areas of strength and suspected weakness.

Recommendations for intervention with children identified as having special needs and who are eligible for special education services are made and put into place at a Planning and Placement Team meeting. Parents, as members of the team, are an integral part of the process.

Readiness testing

Many school districts use readiness testing in the kindergarten-entry process. Readiness testing focuses on those skills that a child has acquired rather than on a child's potential for learning. The results are often misused by determining that a child is not ready for the kindergarten program when, in fact, the potential for learning is a far better predictor of school success. A child's performance on a single test, administered in the spring prior to kindergarten entrance and under unfamiliar conditions, may not be an accurate measure of a child's level of functioning. Also, it does not take into account the growth that will take place during the summer months.

Timing of the preliminaries

The times at which various steps in the entry process take place deserve careful consideration. Hearing and vision screening, for example, should be provided in the spring so that follow-up referrals may be made prior to kindergarten entrance. Gathering data regarding the numbers of children, getting their developmental histories from their parents and observing the children informally should also take place in the spring. The school district can also plan bus routes and make classroom and teacher assignments. The families of prospective kindergartners can obtain information about the school, meet kindergarten teachers and receive general information about schedules and forms to be completed by their child's health-care provider.

With these advance preparations providing a good foundation, additional essential steps taken in the fall will help make the child's entrance to kindergarten a more positive experience. Options for gradual entry are encouraged. These include having new kindergarten pupils attend, at first, for shorter days, or dividing children into small groups which come to school on specified, separate days during the first week or more of school. After children are oriented to the school routine, teachers and specialists can make planned observations to determine specific strengths and weaknesses of individual children.

Advance preparations will help make fall entry to kindergarten a more positive experience.

Ongoing evaluation

The teacher's recorded observations of the emotional, social, physical and intellectual functioning of each student are of great importance; they are the key to planning programs that will be appropriate to the development of individual children.

Many forms of evaluation are used to measure students' progress in all areas of growth. Evaluation has several essential purposes.

- ☐ It facilitates teaching and learning.
- ☐ It produces useful records which provide for continuity.
- ☐ It guides decisions about curriculum and teaching.
- ☐ It provides feedback on educational and developmental progress.

The following questions will help to guide the ongoing evaluation process:

- ☐ Do procedures involve gathering and recording ongoing information about children in a systematic way?
- ☐ Do procedures involve gathering and recording information from all sources including observation, teacher-child conferences, parents, resource teachers, work samples and child-made records?
- ☐ Are times scheduled each day for gathering evaluation information?
- ☐ Are procedures established for communicating objective information about children's accomplishments to their parents?
- ☐ Is each child's progress assessed primarily through observation and recording in which results are used to improve and individualize instruction? (Foster, Hough, Granger, et al., 1979)
- ☐ Are children allowed to progress in all areas as they acquire competence, not "promoted" or "failed"?

Teacher observation of child behavior

There is no one right way to observe and record. Different times and different methods work for different teachers. Observations need to be made as inconspicuously as possible and they need to be kept confidential.

The teacher as observer must be able to describe accurately what children do. Care must be taken to record observations in clear, descriptive language and to differentiate between the observed behavior and the interpretations of that observed behavior. Observing children helps teachers to become objective. Observations are a link between theory and practice. They can be used to share fresh, meaningful examples of children's growth and abilities with parents or to indicate areas of need which require joint support by the parents and teacher. As teachers become skillful in accurately recording behavior, they will come to see the value of keeping such records. The following suggestions for teachers are consistent with ideas offered by Cohen and Stern (1958):

- ☐ Learn to accept behavior as being caused; as being the best adjustment the child can make to the situation at that moment.
- ☐ Realize that behavior can be changed through discovering underlying causes and changing or eliminating these causes.
- ☐ Have a record of growth.
- ☐ Check against your guesses, against child growth and development theories, or against the thinking of others who work with kindergarten children. An end product is to come to an understanding of effective ways of working with children.
- ☐ Use records as a basis for communicating children's experiences to others.
- ☐ Learn to understand the important concept of individual differences.
- ☐ Come to understand characteristics of children within the context of broad developmental levels and variety of abilities and interests.
- ☐ Learn to become selective of significant behavior, to become skillful in writing descriptive records, free from interpretation.
- ☐ Learn to understand your own adult behavior as well as to understand other adults better.
- ☐ Become more sympathetic and effective teachers.
- ☐ Become more secure with children and within themselves.

All observational systems have certain common elements (Gordon and Browne, 1985, p. 138-139):

Focus

- ☐ What do you want to know?
- ☐ Whom/what do you wish to observe
- ☐ What aspects of behavior do you want to know about? Motor skills? Social development? Problem solving?
- ☐ What is your purpose? Studying the environment? Observing the daily schedule? Evaluating a child's skills? Dealing with negative behavior? Analyzing transitions? Conferencing with parents?

System

- ☐ What will you do?
- ☐ How will you define the terms?
- ☐ What kind of time frame or unit of measurement will be needed?
- ☐ How will you record the information you need?
- ☐ For how long will you record?

Tools

- ☐ What will you need for your observation?
- ☐ How will you record what you want to know? Video or tape recorder? Camera? Pencil and paper? Chart?

Environment

- ☐ Where will you watch? Classroom? Playground?
- ☐ What restraints are inherent in the setting?

Four types of observation are frequently used for record-keeping purposes (Gordon and Browne, 1985):

Narrative. The most valuable and one of the most efffective ways of observing and recording behavior is an attempt to record nearly everything that happens.

- ☐ Diary descriptions are one form of narrative. This means describing every action within a given time period. It might be a five-minute period during self-selection activity time in which one child would be observed and recorded. Another way to use this type of running record is to watch an area of the room or playground and record who is there and how they are using materials or equipment.
- ☐ Specimen descriptions entail taking on-the-spot notes, a modified version of the narrative. A teacher carries around a small notebook and pencil and jots down noteworthy events during the day.
- ☐ The journal form of narrative record keeping is used to record each child's general behavior either while it is happening or soon after. A page in a log or journal is set aside for each child in the class. The challenging part of this technique is to have enough detail so that whole situations can be pictured later. Notes need to reflect clarity, accuracy and an accounting free of personal biases.

Time sampling is an observation of what happens within a given period of time. It is less descriptive and more specific. In a time sample, an observation is made of an activity or child at regular time intervals. The teacher defines the behavior to be observed, then makes a coding sheet to tally the observations of one or more children engaged in the activity which show the defined behavior in specific intervals of time.

Event sampling. With this method, the observer defines an event, devises a system for describing and coding it, then waits for it to happen. Thus, the behavior is recorded as it occurs naturally. Examples might be to record incidents of child withdrawal or avoidance to teacher requests. Like time sampling, event sampling looks at a particular behavior or occurrence, but the unit is the event rather than the prescribed time interval.

Modified child–study techniques. Since observation is the key method of studying young children in their natural settings, it makes good sense to develop many kinds of observational skills. Modified child-study techniques can define the scope of the problem fairly quickly.

- ☐ Checklists can tell much about one child or the entire class. Information is collected in a short space of time, usually a week. An activity checklist is an example. After determining the purpose of the observation, categories to be observed will be defined (involvement in learning center activities, such as science area, block play, art, music, or in outdoor activities, such as climbing, wheel toys, animal care). A simple checklist for indicating where children spend their time can then be designed to provide an accounting of children's interests over a week's period of time.
- ☐ Rating scales extend checklists by adding some quality to what is observed. What is the extent of the children's involvement? A rating scale may use words like never, seldom, sometimes, usually, always, or a numerical key like one through five.

Record keeping and assessment

Record keeping is an integral part of each day's learning experiences as the teacher notes progress and then plans appropriate individualized or

small group instruction. Keeping track of the variety of ability levels and skills accomplished is no easy task. Record keeping should be made simple, clear, concise and useful. Social and emotional observations are best noted with anecdotal records which include dated accounts of the specific behavior. Record keeping related to curriculum will include the knowledge and skills that the child has mastered and notes about such progress.

Videotaping the children's involvement in their interest-center activities is a useful tool. Tape recordings of children's conversations and photography of their work are also valuable. Report cards are a way to account for children's progress and a way to communicate that progress to parents. Samples of student work, including child-made books with expressed thoughts and drawings, self-portraits and examples of name writing, represent important aspects of record keeping. It is especially effective to keep samples of children's work from the beginning, middle and end of the year for growth comparison. Since most kindergarten work should be oriented toward process rather than product, many activities will not culminate in durable samples of work, so other methods of assessment will be important.

Teachers should keep samples of children's work for growth comparisons.

Child-created records are another source of assessment. Kindergartners keep records when they check their names on a learning center roster or when they place pegs in a board to indicate that they worked in the language arts center.

Teacher-child conferences can be the source of anecdotal records of significant information gained in conferences. Encouraging a child to talk about an activity, or asking questions to try to understand the child's motivation and reasons behind overt behavior will lead to helpful record keeping. The child should be left with a summary and clarification of points which were raised during the conference.

Through individual and small group interviews with a teacher, children's perceptions of what they have learned can be noted. As another form of assessment, children who understand a concept can be asked to teach it to children who don't understand. Such teaching could be videotaped or tape recorded.

Information from resource personnel and parents provide helpful ongoing evaluation of children from other points of view. Such information provides a valuable check on a teacher's assessment of a child.

After kindergarten

The school year is coming to a close. Attention turns now to planning for each child's continuing experience in the next year.

Classroom placements should be consistent with children's social, emotional, cognitive and physical development. Children should be placed with teachers who are sensitive to their individual needs and can accept children as they are. Children are placed where it is expected that they will do their best, which may be in a multi-age class, an ungraded primary setting or a one-grade-level setting. (Bredekamp, 1987)

Persistent difficulties of individual children are handled in small groups within a classroom where the composition of the groups is flexible and temporary, and intensive help is available.

Developmentally appropriate programs in the primary grades, as discussed throughout this guide for kindergarten, form a continuum of learning for six-year-olds. Children's learning continues to be integrated. A major pressure felt by first-grade teachers is the need to "cover the curriculum." That is often done by tightly scheduling specific time segments for each subject. However, young children in first grade, just as in kindergarten, do not need to distinguish learning by subject area.

In order to provide for program continuity, communication and cooperative planning between the kindergarten and first-grade teachers and the elementary principal are fundamental. Each needs to be knowledgeable about the basic philosophy, objectives and expectations of the other's program. All need to accept the fact that children will be entering first grade with varied experiences and skills within the normal range of development and that expectations should be flexible about when and how children will acquire certain competencies. All should understand well the nature and provisions of the child-care centers which offer kindergarten programs so that children who have attended those programs and are eligible for first grade will have the ease of entrance to a public school first-grade class.

It is recommended that scheduled planning time be provided so that kindergarten and first-grade teachers have opportunities to discuss the significance of their programs. The following suggestions for topics of discussion, among others, will help clarify and strengthen the bond between teachers of the kindergarten and first grade:

- ☐ the appropriateness of the kindergarten and first-grade programs in relation to all children's participation;
- ☐ intellectual development;
- ☐ interests, attitudes and motivation;
- ☐ social and emotional maturity;
- ☐ physical development and abilities;
- ☐ speech fluency and general language development;
- ☐ ability to follow directions and attend to tasks; and
- ☐ prior kindergarten experiences before entering public school.

It is urgent that school personnel—teachers, curriculum supervisors, principals and superintendents—evaluate the appropriateness and continuity of learning in the primary grades. If kindergarten teachers are working toward more developmentally appropriate practices and the first-grade teachers are not, the children will become the victims.

The position statement regarding kindergarten entry and placement speaks to entrance to first grade as well. Extra-year classes and kindergarten retention need not be the answer if first-grade or multi-age classes offer flexibility, special services when needed, small class size, teachers who provide active learning programs in response to how young children learn, and sensitivity among educators at all levels.

Are expectations for first grade inappropriately high?

Too often the reason given for providing an extra-year program is that some young children are too immature to cope with the demands of first grade. May it not be, in some cases, that expectations for first grade are inappropriately high? Rising retention rates and placements in transitional or readiness programs may be symptoms of a problem that programmatic changes could solve.

The child being considered for either a transitional class or retention may be exhibiting a need to continue to develop and grow in a setting that is adaptive to his/her needs for less pressure, that provides more social and emotional support, that continues to offer concrete experiences to foster cognitive learning and that allows time for the emergence of fine and gross motor competence. But shouldn't those opportunities exist in first grade?

If alternative first-grade placements are needed until there is enough flexibility for every child to progress naturally into first grade, criteria for placement and guidelines for the program must be thoughtfully considered. It is essential that positive, continuous communication take place with parents concerning the benefits of alternative programs. Another possibility is that the needs of immature, young children can be served by some extra attention within a regular grade classroom setting.

There may also be children who are having difficulties in learning or adjusting for which special education services are required. Placement into special education programs or integration into regular classes where special services will be provided is a cooperative decision which must be made by the school Planning and Placement Team.

"When a sound kindergarten program is followed by an equally sound elementary school program, remedial problems can be lessened, retentions can disappear and enthusiastic students can result. Let's try to insure that all children have this opportunity." (Nebraska Department of Education, 1984, p. 14)

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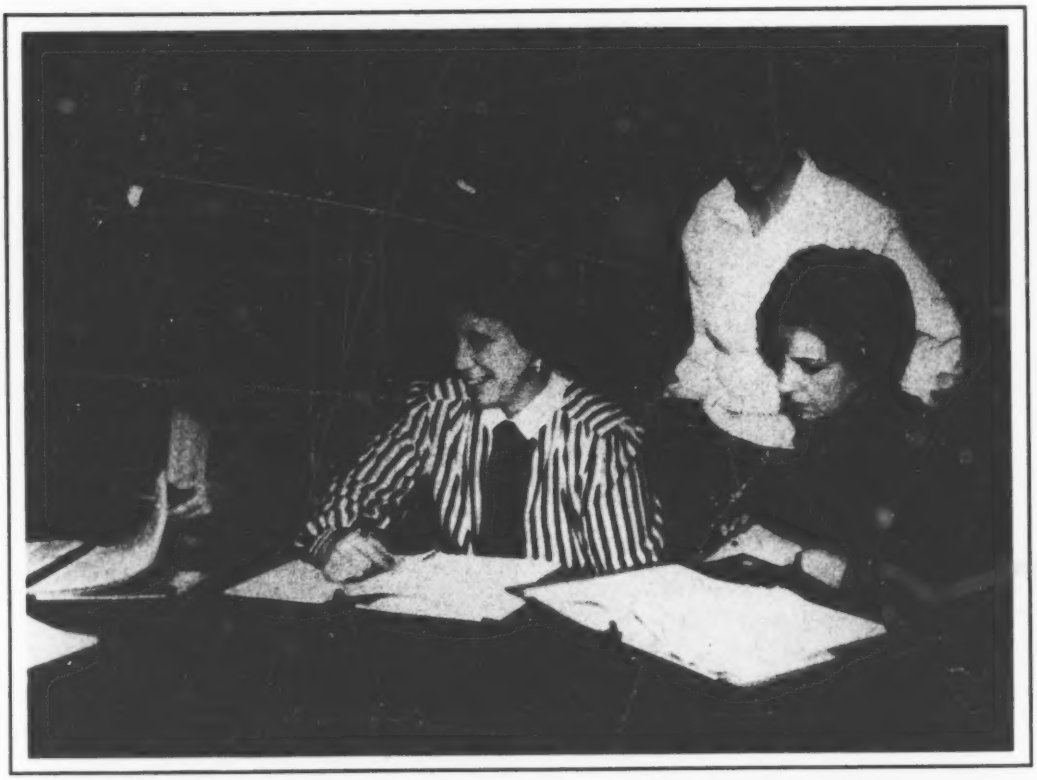


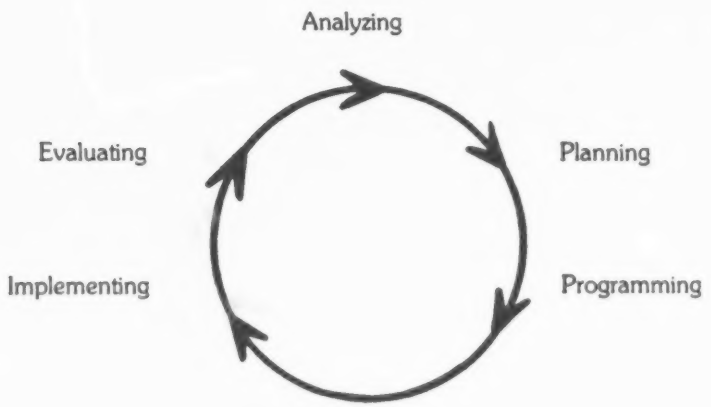
9

Program Planning and Evaluation

Program Planning and Evaluation 9

The preceding chapters describe the characteristics, components and resources recommended for a high-quality kindergarten program. But how does a community plan for such a kindergarten program in its local school district? Some districts will want to undertake extensive examination of their present kindergarten program while others may simply seek ways to strengthen an existing program that already features the basic components suggested in this guide. No matter what the nature of the current program, however, most districts can benefit from the in-depth review entailed by the program planning process. Although program planning and evaluation are discussed as two separate topics in this chapter, they are, of course, phases of the same process. Planning actually begins and ends with evaluation. The planning process is circular as the diagram below shows.

Although the planning process follows the same steps in every district, it is in some ways unique in each community. For example, planning for the kindergarten program should be part of each district's overall curriculum planning process, which will vary in some details. In addition, planning should reflect the district's particular philosophy, goals and objectives.



Source: Connecticut State Department of Education, *A Guide to Curriculum Development: Purposes, Practices and Procedures*, 1981

Planning committee

The responsibility for kindergarten program planning should be assigned to a committee that represents all important constituencies, including district-wide administrators (with one or more elementary school principals); kindergarten and primary teachers and paraprofessionals; representatives of local public and private preschools and day-care centers

Planning committees broaden the base for ideas and consensus.

(including, if possible, parents, teachers and administrators); subject area curriculum directors and other school professionals; and, most important, parents. Establishing a representative group is important for a number of reasons. Not only can all these individuals contribute their own particular experience, expertise and insight to the committee's deliberations, but also broad-based representation in program planning is an effective means of building consensus. Consensus is necessary to generate support for the kindergarten program and to build toward a continuum of developmentally appropriate experiences from prekindergarten through the primary grades and beyond.

The charge to the committee should be clearly stated, and one person should be designated to head the group. Endorsement from the local board of education is also desirable. Support from the highest levels of authority underscores the significance of the undertaking and lends credibility. Initial support also facilitates implementation of any recommended changes that may result from the committee's work.

Planning models

There are many strategies and models for effective program planning. A helpful source for thoughts on curriculum development is the State Department of Education's *A Guide to Curriculum Development: Purposes, Practices and Procedures* (1981). The guide notes four questions central to planning posed by curriculum expert Ralph Tyler. The planning process, aided by the material presented in this guide, should answer the following questions:

- ☐ What educational purposes should the kindergarten program serve?
- ☐ What educational experiences are likely to achieve the stated purposes?
- ☐ How can these educational experiences be effectively organized?
- ☐ How can we determine whether or not these purposes are being attained?

An in-depth discussion of program planning is beyond the scope of this guide, but a few comments about key elements as they apply to kindergarten program planning with evaluation covered in greater detail, may prove helpful.

Analysis

The analyzing phase of the planning cycle is an essential step. In this phase, the planning committee will seek to identify the educational purposes the kindergarten program should serve. This guide details the kinds of program outcomes advocated by early childhood educators.

Questionnaire surveys, some very detailed, are commonly used to gather opinions during the analysis phase, although other methods, such as interviews, may also be used. Some school districts may choose to use consultants in analysis activities. They can provide useful perspectives but a self-study process will also yield useful information.

Ideally, the opinions of all constituencies represented on the planning committee should be solicited in the analysis phase. Initial consensus among these groups about desired program outcomes, while desirable, should not be expected. As early childhood educators are well aware, and as earlier chapters in this guide illustrate, there are considerable differences of opinion about many aspects of kindergarten programming. Opposing

ideas about any number of issues—length of the kindergarten day or what type of program should be offered, for example—may surface and must be resolved. In most cases of disagreement, early childhood educators will need to take the lead in generating support for the kinds of program outcomes advocated in this guide, program outcomes that are based on current understanding of child development principles and on research in the field.

Planning

Based on the information gathered in the analysis phase and on the expertise of the program planning committee, a philosophy, goals and objectives for the district's kindergarten program can be developed. A written philosophy statement provides explicit direction for more detailed planning. When a district's philosophy about kindergarten is clearly stated, consistent goals, objectives and learning experiences—key elements in program planning—can be formulated. Goals are broad statements of program outcomes. For example, goals for the kind of kindergarten program advocated in this guide might include:

A written philosophy statement provides clear direction for detailed planning.

- ☐ to help children develop a positive self-concept;
- ☐ to expand children's concepts and ideas about the world;
- ☐ to help children express themselves in many ways; and
- ☐ to help children develop curiosity and love of learning.

(Adapted from *A Guide to Curriculum Development: Purposes, Practices and Procedures.* State Department of Education, 1981, p. 28)

Objectives are more specific than goals. Good objectives will emphasize growth and development, cover all four developmental areas—intellectual, physical, social and emotional—and reflect the individual developmental differences among children of kindergarten age. "If the objectives are too general or stated in terms of what the teacher should do, it is difficult to know what is to be learned and how to evaluate it." *(A Guide to Curriculum Development: Purposes, Practices and Procedures,* State Department of Education, 1981, p. 19).

It is especially critical to formulate objectives based on the developmental characteristics of children of kindergarten age. The charts in Chapter 2 are an excellent resource to use in developing objectives, because they describe developmental parameters in all four developmental areas. Program planners may wish to compare any program objectives developed against the chart to insure they have not included objectives that are beyond the developmental range of kindergarten children.

Programming and implementation

With philosophy, goals and objectives agreed upon, it is possible to determine the learning experiences, instructional strategies and instructional materials appropriate for the kind of kindergarten program defined. Precise definition of learning experiences—what children will *do*—translates philosophy, goals and objectives into actual classroom practices. Further, learning experiences are best described in conjunction with specific instructional strategies and materials to be used. Chapter 5, "Learning in Kindergarten," and the curriculum chapters in Part II of the guide provide information that can be of great value in planning learning experiences and instructional strategies. The role of interactive learning/play, the benefits of an integrated curriculum and the implications of research in curriculum

areas are all important considerations. Chapter 3, "Principles and Components of a High-Quality Program," also provides information that may be useful for planning learning experiences and instructional strategies and for identifying instructional materials.

Assessing needs and allocating resources. Implementing a new, or modified, kindergarten program requires identifying and allocating the resources necessary to conduct a needs assessment to determine what, if any, new resources are required. This is an important step in program implementation. When it is impossible to provide all the new resources immediately—not an uncommon problem—it is important to carefully assign priorities for adding resources. The priorities should be based on the program's philosophy, goals and objectives. For example, providing a paraprofessional for each kindergarten class, so that students receive more individual attention, may be rated as a higher priority than purchasing new playground equipment. When significant program modifications are planned—if the kindergarten day is to be extended, for example—the need to insure that the necessary resources are available is particularly important.

Program evaluation

Program evaluation involves defining and collecting information which can be analyzed to determine whether or not a program is achieving its goals and objectives. As a part of analysis, evaluation of the current program may be one of the first steps in the program planning process. In this section we will focus on evaluation of a newly defined program.

In planning program evaluation, a variety of evaluation techniques should be considered.

Once the kindergarten planning committee has completed planning, but before the new or revised program is implemented, it is necessary to consider how the program will be evaluated. A variety of evaluation techniques, which may be used individually or in combination, should be considered. The following characteristics of good evaluation should be kept in mind when planning program evaluation:

- ☐ Select who or what will be evaluated. Decide how often and under what circumstances the evaluation will take place.
- ☐ Have a clear purpose. Clearly define the reason for the evaluation and expected outcomes.
- ☐ Decide how the data will be collected. Consider a variety of data gathering techniques and who will be responsible for data collection.
- ☐ Define what will be done as a result of the evaluation. Decide to whom the results will be reported and what actions will be taken as a result.

No matter what forms of evaluation are selected, the committee should insure that all aspects of the program are covered. Evaluation of one component of the program—reading readiness for example—does not constitute program evaluation. The opinions of parents and of kindergarten and primary grade teachers are equally important indicators of the success of the kindergarten program. Without thoughtful planning for evaluation, it will be impossible to determine whether or not the program is achieving the desired outcomes.

In an article concerning evaluation in the 1985 *Yearbook of the Association for Supervision and Curriculum Development*, Vincent Rogers, professor of education at the University of Connecticut, suggests that the underlying assumptions inherent in most types of educational research and evaluation are often unexamined. Current curriculum evaluation, according to Rogers, operates largely on "conventional research," which is posited on a distinct set of assumptions, including the following:

- ☐ Linguistic modes of learning and expression are the only modes of learning worth evaluating. Thus, we place great value on using words to name, describe or define, while placing minimum value on visual, auditory and kinesthetic modes of reacting to phenomena.
- ☐ Learning can be assessed piecemeal, at any given point in time, without concern for learning over long periods of time.
- ☐ What we see or measure now is likely to be a stable characteristic over time.
- ☐ Evidence obtained through direct observation of or interaction with the learner is inferior to that obtained in paper-and-pencil form.
- ☐ The processes used in coming to a problem's solution are not as important as the answer.
- ☐ Learning can always be demonstrated in some overt, observable way.
- ☐ "Efficiency" is of primary importance in the teaching-learning act, that is, we are most concerned with how early and how fast something can be learned.
- ☐ Grades and test scores give a reasonable picture of school performance.
- ☐ The learner's products—poems, sketches, models and so forth—are of relatively minor value in the evaluative process.
- ☐ The personal qualities of teachers are neutral and have little effect on learning.
- ☐ Objectives must be stated clearly before evaluation can take place.

While noting that there is "nothing inherently wrong" with curriculum evaluation based on conventional research theories, Rogers points out that different assumptions can lead to different types of evaluation. It is possible, for example, to use assumptions such as the following as the basis for evaluation:

According to Vincent Rogers, different assumptions can lead to different types of evaluation.

- ☐ Because social institutions are enormously complex and subtle, it is difficult to understand what happens in classrooms. The experiences and attitudes of children and teachers both in and out of school all have a bearing on what occurs in the classroom. Accurate description requires understanding complexity.
- ☐ Intensive study over a long period of time is essential for genuine understanding of a phenomenon.
- ☐ The most effective way to study a given phenomenon is through direct, on-site, face-to-face contact with the people and events in question. What people do is often different from what they say. Thus, reliance on paper-and-pencil questionnaires is often misleading.
- ☐ A basic function of program evaluation is to gather a comprehensive description of children and programs. Such description suggests a basic interest in process rather than product or output. A school may richly document the lives of children as they move through school, including samples of children's work, excerpts from teachers' journals, comments of observers, and so on. Parents and teachers can then assess the rich descriptive information and decide for themselves the effectiveness of the school's programs, methods and activities.

Evaluation based on assumptions such as these is sometimes called naturalistic or qualitative evaluation. This type of evaluation is particularly suited to the kind of kindergarten programming advocated in this guide.

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Epilogue
Implications for Building a Kindergarten/Primary Continuum

Epilogue

Implications for Building a Kindergarten/Primary Continuum

Learning is not attained by chance,
it must be sought for with ardor
and attended to with diligence.
— Abigail Adams

These are changing, yet challenging and exciting times for kindergarten teachers and curriculum planners. An ever-increasing number of children have already participated in some type of early childhood education program on the day they first enter the kindergarten classroom. The *ardor* for learning Abigail Adams wrote about more than 200 years ago has already been kindled. And because this enthusiasm is already instilled, we need to approach—with even greater *diligence*—the planning, implementation and ongoing revision of developmentally appropriate program components.

This guide focuses on kindergarten children and their programs. However, much of what is described can be a resource for creating quality programs for primary education as well. If the education of young children is viewed as a continuum of experiences, it can be made more effective by capitalizing on opportunities for continuity and by fostering relationships that exist along that continuum.

Goals and objectives for a curriculum that will help children develop in all areas, despite their varied abilities, skills and backgrounds, should be constructed from a philosophy statement about the development of children and the programs which serve their needs. The result should be an early childhood curriculum that helps children discover, grow and learn through exploration with challenging activities and materials.

In its "Position Statement on Developmentally Appropriate Practice in the Primary Grades Serving 5- Through 8-Year-Olds" (found in Bredekamp, 1987, pp. 62-66), the National Association for the Education of Young Children emphasizes the following principles:

- ☐ Teachers of young children must always be cognizant of the *whole child.*
- ☐ The curriculum should be *integrated* (planned around themes or facilitated around learning center activities) throughout the primary grades.
- ☐ Primary-age children should be engaged in *active* rather than *passive* activities to define their developing skills and grasp abstract concepts.
- ☐ The curriculum for primary-age children should provide many developmentally appropriate materials for children to explore and think about, and opportunities for interaction and communication with other children and adults.
- ☐ Opportunities to work in small groups should be provided in order to strengthen children's abilities to communicate, express themselves and reason.

- ☐ Teachers need to recognize the importance of developing positive peer group relationships by providing opportunities and support for small group projects that develop both cognitive abilities and peer interaction.
- ☐ Young children bring to the classroom great diversity in background, experience, culture, socialization and learning style. Because of these and variances in the timing of individual development, educators need to be cognizant of age-appropriate expectations and have knowledge of what is individually appropriate, while offering a wide variety of materials and teaching methods.

Parents, teachers, school administrators and others who work together in the molding of curriculum for young children share a challenge and a responsibility. Planning for the education of the next generation in an ever-changing world is the responsibility. The challenge is to inspire young children to dream of all that they can be and then to help them realize their dreams.

Reference

Bredekamp, Sue, ed. *Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8, Expanded Edition.* Washington, DC: National Association for the Education of Young Children, 1987, pp. 62-66.

Appendix

NAEYC Curriculum Standards and Connecticut Teaching Competencies

These pages present the relationship of the National Association for the Education of Young Children's Curriculum Standards to the State Department of Education's Connecticut Teaching Competencies.

NAEYC Standards*	Connecticut Competencies stated as questions: "Does the candidate . . ."
A. General Education: liberal arts, humanities, and social, biological and physical sciences	1. Demonstrate facility in the skills of reading, writing and mathematics?
	2. Demonstrate knowledge of the subject to be taught? — know and understand major principles and concepts? — understand the purpose and value of the material to be taught? — formulate meaningful questions about the subject matter? — know where to look for further information?
B. Professional Foundations and Instructional Knowledge Areas 1. Human development through the life span, with special emphasis on cognitive, language, physical, social and emotional development, both typical and atypical, with special emphasis on the young child	3. Demonstrate knowledge of human growth and development as it relates to the teaching/learning process? — understand major theories of human development? — understand how physical, social, emotional and intellectual development relate to planning and organizing instruction? — know about various teaching and learning styles? — recognize the conditions and needs of special students?
2. Historical, philosophical, psychological and social foundations of early childhood education	4. Demonstrate a knowledge of the American public school system? — know and understand local, state and federal governance of school? — understand the teacher's place in the district? — understand the rights and responsibilities of students, parents and teachers?
3. Curriculum for teaching young children, including a. Goal setting—to facilitate children's physical growth and development in skills in communication, inquiry, creative expression and interpersonal relations	5. Plan instruction to achieve selected objectives? — identify and sequence instructional goals and objectives? — identify teaching procedures and sequence learning activities? — select appropriate human resources, materials, media? — plan instructional activities which provide for individual differences?

**Early Childhood Teacher Education Guidelines:* Position Statement of the National Association for the Education of Young Children (Washington, DC: NAEYC, 1982), pp. 4-6.

NAEYC Standards	Connecticut Competencies stated as questions: "Does the candidate . . . "
b. Content—developmentally appropriate learning experiences that facilitate development and learning in all areas: cognitive, language, physical, social, emotional and aesthetic	6. Effectively implement instructional plans and use appropriate instructional techniques? — present material at students' levels of interest, ability and background? — conduct activities in flexible, logical, developmental sequence? — provide illustrations, examples, applications? — use a variety of materials, media, technology? — use a balance of individual, small-group and large-group instruction? — provide instructional activities that foster student involvement? — match teaching styles to learning styles? — revise instruction on basis of student data?
c. Methodology • planning, implementing and evaluating developmentally appropriate content and methodology for children in curriculum areas such as language, mathematics, science, social studies, health, safety, nutrition, art, music, drama and movement • creating, evaluating and selecting materials	7. Effectively communicate with students? — provide clear, coherent logical directions, explanations and expectations? — use acceptable oral and written expression? — provide for two-way communication during lessons? — establish verbal and nonverbal rapport and positive reinforcement? — communicate enthusiasm and self-confidence? — communicate with students individually as well as collectively?
• creating learning environments using concrete manipulative materials and play as instruments for enhancing development and learning	8. Help students develop positive self-concepts? — recognize worth of all students and opportunities presented by racial, cultural, sexual and religious diversity? — demonstrate sensitivity to and respect for needs and feelings of all students? — demonstrate patience, empathy and enthusiasm?
	9. Facilitate the independence of the student as learner? — recognize and encourage special interests and abilities of individual students? — engage students in selecting their own learning objectives and activities? — pose probing questions that stimulate children to recall, analyze, synthesize and evaluate? — present opportunities that foster thinking skills and problem-solving skills? — assist and encourage students to research issues and questions of concern to them? — promote students' ability to communicate effectively with others about ideas and concerns?
• creating environments and planning for the individual needs of all children, including children with disabilities and special abilities • understanding various curriculum models	10. Effectively organize time, space, materials, and equipment for instruction? — establish and maintain classroom routines and procedures? — use instructional time effectively, pace appropriately and maximize time on task? — provide an attractive, orderly learning environment?

NAEYC Standards	Connecticut Competencies stated as questions: "Does the candidate . . . "
4. Observation and recording children's behavior in order to achieve goals and provide for individual needs	11. Effectively assess student needs and progress? — select appropriate materials and procedures for assessing student progress on objectives? — diagnose entry-level skills and knowledge of students? — recognize when students are deficient in basic skills and provide or recommend corrective action? — use data from systemwide standardized testing when appropriate? — create or select evaluation instruments or procedures to obtain data to monitor student progress and effectiveness of instruction? — develop and maintain group and individual record-keeping systems? — evaluate students on criteria aligned with objectives?
5. Preparation for working with atypical children: understanding the child's needs and knowing when to ask for help from specialists	12. Effectively meet the needs of exceptional students? — obtain and use data from student records? — identify students who require specialist assistance? — obtain and use data from colleagues as necessary? — provide appropriate instruction?
6. Communication and conference techniques, interpersonal and intergroup relations, and techniques for working with staff as an instructional team	13. Establish a positive environment? — establish and maintain appropriate behavior standards for students? — develop an atmosphere which fosters self-discipline? — promote positive interpersonal relations based on mutual respect? — handle discipline fairly and consistently?
7. Family and community relations, including communication with parents and parental involvement	15. Encourage and maintain cooperative involvement and support of parents and the community? — establish ongoing two-way communication based on mutual respect? — provide opportunities for parent and community involvement? — obtain and use information about students from parents? — communicate to parents goals and objectives for both program and students? — conduct effective parent-teacher conferences? — use community resources in instruction?
8. Awareness of value issues and the existence of codes of ethics in professional life	8. Help students develop positive self-concepts? (See 8 above.)
9. Comprehension of cultural diversity and its complications	
10. Legislation and public policy as it affects children, families and programs for children	
C. The practice area provides two kinds of field experience: field work in conjunction with coursework and student teaching.	
1. Field work—observation and varying degrees of participation with families as well as children from diverse backgrounds	15. Encourage and maintain cooperative involvement and support of parents and the community? (See 15 above.)

NAEYC Standards	Connecticut Competencies stated as questions: "Does the candidate . . . "
2. Student Teaching	14. Meet professional responsibilities?
a. Student teaching is at the end of the preparation program.	— demonstrate responsibility for self-growth, professional improvement and ongoing self-evaluation?
b. Exemplary classrooms are used.	— work cooperatively with colleagues and administrators?
c. Student teachers are supervised by on-site teachers as well as by college faculty.	— follow the policies, procedures and curricula of the school district?
	— demonstrate ethical behavior?
d. Students spend a minimum of 300 clock hours in student teaching.	
e. Student teaching seminar meetings are held to analyze, evaluate and discuss the student teaching experience.	
f. Student teaching includes working with parents.	
g. Student teaching includes working with interdisciplinary teams of professionals.	

Acknowledgments to Publishers

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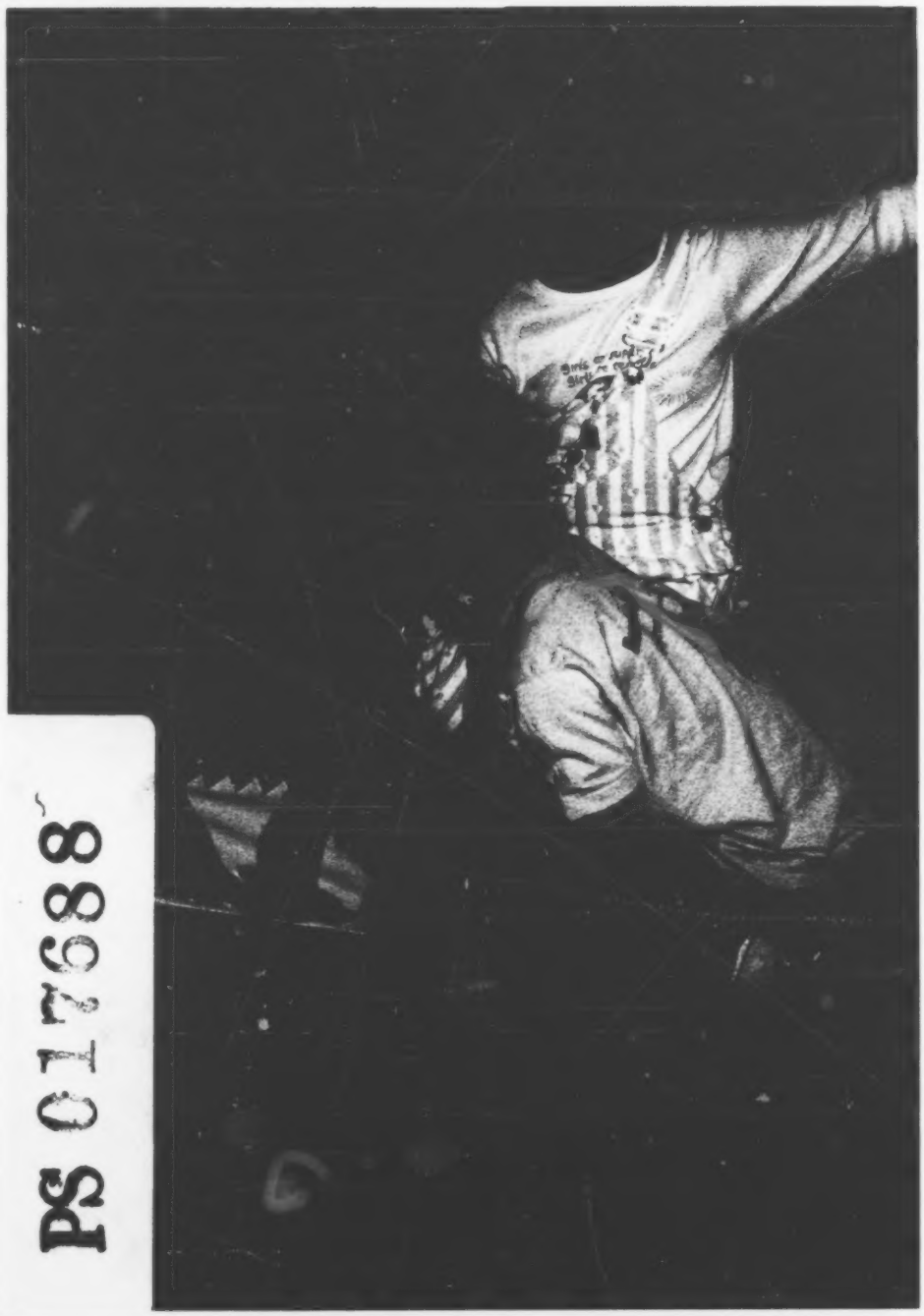
A GUIDE TO PROGRAM DEVELOPMENT FOR KINDERGARTEN

PART II



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A GUIDE TO PROGRAM DEVELOPMENT FOR KINDERGARTEN

PART II

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Principal editor of *A Guide to Program Development for Kindergarten Part II* was Donald G. Goranson, Jr.

Photography by Georgia Sheron

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Foreword

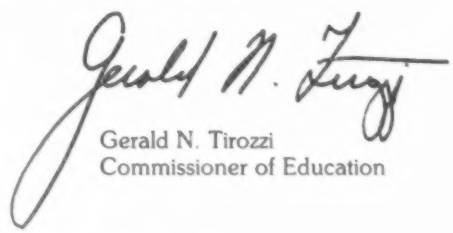
Each year a vast majority of Connecticut's kindergarten-age children enroll in public schools, and many of these youngsters enter kindergarten with significant prior preschool experience. This phenomenon, as well as recent compelling research about how young children learn, has led educators to question the assumptions underlying present kindergarten programs. The result of this scrutiny may be fundamental change in the philosophy, goals, content, instructional techniques and evaluation of kindergarten programs in Connecticut. This *Guide to Program Development for Kindergarten* has been developed to help stimulate this dynamic—and essential—process.

A number of basic learning tenets provide the central focus of this guide. They are: (1) all children are capable of learning; (2) children learn best through methods and in environments that respect their individual development and personal interests; (3) the process of learning is dynamic and its outcomes are integrated into the lives of the young learner; (4) the innate desire to learn can be heightened by caring and sensitive adults in the lives of children; and (5) children who enjoy school are more disposed toward the benefits of that learning environment.

Similarly, there are a number of teaching premises upon which this guide is based. These include: (1) the kindergarten program is adaptable to the needs of a wide range of learners; (2) a good curriculum is best characterized by the active interaction of children with ideas and materials rather than with single-objective and narrowly-defined paper tasks; (3) the dignity of the learner and respect for the child's personal circumstances must always be affirmed; and (4) the school and family must act as a team collaborating in the education of the child.

This guide is intended to bring useful information to those in the process of creating developmentally appropriate kindergarten programs in all settings—urban, rural and suburban. It encourages teachers and curriculum specialists to create programs that model the enthusiasm young children have for learning. I believe it will be an invaluable resource to all those who are responsible for the education of young children.

The importance of providing high-quality early childhood education has never been more clear. As we endeavor to meet this challenge, I am confident that the creativity and commitment of Connecticut teachers, administrators and parents will ensure the best possible kindergartens for all the young children of our state.



Gerald N. Tirozzi
Commissioner of Education

Acknowledgments

An advisory committee was established in 1985 by Commissioner Gerald N. Tirozzi to develop Connecticut's first *Guide to Program Development for Kindergarten*. Its leadership and coordination were ably provided by Helen C. Martin, chairperson, and Carolyn W. Lester, coordinator. Appreciation is offered to the committee members for the time and expertise they so generously gave in providing philosophical direction and content advice throughout the challenging and professionally stimulating process of developing this guide.

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Thanks are extended to the major authors of Part II, noted below, and to George Coleman of the State Department of Education, who contributed to the writing of several chapters.

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Editorial consultant Donald G. Goranson, Jr., was principal editor of Part II of the guide. Final editing, layout and production were coordinated by Marsha J. Howland and Elizabeth Speno of the Publications Office of the State Department of Education. Christine Mercier provided staff support.

Staff preparation of the manuscript was provided through the dedicated efforts of Janet Manyak, Ann Marie Day and Elizabeth Speno, with assistance from Marie Day and Dorothy Heffernan.

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Introduction

Introduction

Young children learn best by actively exploring virtually everything around them — by interacting with adults, other children and materials in a joyful examination of their world. The best kindergarten environment is one in which it is safe, exciting, important and fun to find things out. An integrated program in which learning is focused through projects, learning centers and play activities — not through fragmented subject knowledge acquisition of individual disciplines — will make such an environment possible. It is this understanding that has provided a fresh perspective on curriculum planning for kindergarten.

With the premise of integrated programming as a foundation, Part II of Connecticut's *Guide to Program Development for Kindergarten* presents helpful curriculum concepts in seven distinct areas. Included are the arts (creative dramatics, creative movement, music and visual arts), foreign languages, language arts, mathematics, physical education (with health and safety), science and social studies. These subjects are discussed separately in order to facilitate the reader's review of the detail and guidance within each area. An integrated approach, however, remains the key.

A sound kindergarten program must also be developmentally appropriate; curriculum goals should be based on an understanding of the individual needs, interests and developmental levels of the children. When necessary, modifications should be made in the environment for children with special needs.

In the type of program advocated in this guide, developmentally appropriate materials and equipment which project heterogeneous racial, sexual and age attributes are selected and used. Teachers provide activities and materials selected to emphasize concrete experiential learning which:

- ☐ fosters positive self-concept, a sense of competence and a positive feeling toward learning;
- ☐ encourages children to think, reason, question and experiment;
- ☐ encourages language development;
- ☐ enhances physical development and skills;
- ☐ encourages and demonstrates sound health, safety and nutritional practices;
- ☐ encourages creative expression and appreciation for the arts; and
- ☐ respects cultural diversity of teachers and children.

Additional guidelines for developmentally appropriate practice are noted in a position statement of the National Association for the Education of Young Children:

- ☐ Developmentally appropriate curriculum is designed to develop children's knowledge and skills in all areas of development — physical, emotional, social and intellectual — and to help children learn how to learn through an integrated approach.
- ☐ Curriculum planning emphasizes learning as an interactive process through active exploration and interaction with adults, children and materials.
- ☐ Learning activities and materials should be concrete, real and relevant to the lives of young children — the key to motivated, meaningful learning in kindergarten and the primary grades. Workbooks, worksheets, coloring books and adult-made models of art products are not appropriate for kindergarten children.

- ☐ Programs provide for a wider range of developmental interests and abilities than the chronological age range of the group. Different levels of ability, development and learning styles are expected, accepted and used to design curriculum.
- ☐ Teachers provide a variety of activities and materials; they increase the difficulty, complexity and challenge of an activity as children are involved with it and as children develop understanding and skills.
- ☐ Outdoor activity is planned daily so children can develop large muscle skills, learn about outdoor environments and express themselves freely.

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The guidelines described in the following pages are presented to stimulate effective planning of developmentally appropriate kindergarten programs or modifications and/or extensions of existing programs. Curriculum planners are urged to consider the philosophical concepts reviewed in Part I of this guide in order to achieve consistency in the development of an integrated curriculum.

A school district's kindergarten curriculum should provide varied experiences and activities to promote intellectual, physical, social and emotional growth. A challenge presented in Chapter 4 of this volume ("Growing Through Mathematics") is an appropriate motivator for excellence: plan a kindergarten curriculum that brings developmentally appropriate experiences "alive to foster an environment where learning is its own reward for students."

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Exploring The Arts

1

- Creative Dramatics
- Creative Movement
- Music
- Visual Arts

Exploring The Arts 1

The arts are essential to the education of every student in the State of Connecticut.

The arts, either as separate disciplines or integrated into other curriculum, should be part of public school programs.

The arts develop feelings of self-worth and contribute to the personal growth of those who participate in creative work. Arts programs encourage listening with understanding, dealing with abstractions and making decisions. Students gain an understanding and appreciation of the values and the intellectual and artistic achievements of their culture and other cultures while exploring, developing and expressing their own uniqueness and creativity. Arts activities can influence students' career choices, their social values and their lifestyles.

State Board of Education Statement Concerning the Arts in Public Education, January 1976

The arts curriculum for kindergarten features multiple components. Therefore, this chapter on "Exploring the Arts," is presented in sections concerning creative dramatics, creative movement, music and visual arts.

Creative Dramatics

Creative dramatics is defined as the youngster's ability to improvise and act out feelings, emotions, and attitudes creatively and expressively, using verbal actions and/or motoric movements.

—Thomas D. Yawkey, 1981

Creative dramatics is a form of expressive language which helps to develop the concept of self and the child's perception of his or her environment. It provides a base for creative and productive concept development as it offers opportunity for fluency of language, flexibility of movement, originality, elaboration of ideas, vocabulary expansion, imitation and self-expression.

Creative dramatics is a form of expressive language which helps to develop the concept of self.

Expressions, interpretations of concern, understanding and desire all are ways in which children can create impromptu drama. It is important to understand that in creative dramatics, children do not develop drama from

a formal script of rigid adult direction. They create characters, actions and dialogue as they guide themselves to think, feel and become involved in the theme or topic. This, however, does not exclude a sensitive adult from participating as a responsive part of the action, helping children to extend and to develop their ideas for creative dramatics. Children develop drama from real and vicarious experiences as well as from stories, verse, fingerplays, songs, creative movement and any other expressive vehicle. The goal is not to put on a performance for others, but to provide children with another avenue of expression.

The classroom teacher is in a position to provide a rich, stimulating environment to foster language, comprehension and creative skills through creative dramatic experiences. The following activities are presented in the order of natural development starting with spontaneous dramatic play. Following solitary and group play, pantomime and role play are techniques a teacher can use to foster creative dramatics (fingerplays, poetry and puppetry). It is important that children are given many such creative experiences.

Solitary and group play promote expression of fantasy and reality as perceived by the child.

Solitary and group play. These provide the opportunity to promote expression of fantasy and reality as perceived by the child. The teacher needs to foster and facilitate play activities by providing daily time periods and conducive, accepting environments for the children. Toys such as dolls, trucks, cars, costumes, utensils, tools, blocks, etc., are essential. Settings such as house corners, boxes to climb inside, puppet theaters, stages or sceneries also are motivators to creative dramatic play.

Pantomime. Expression in the dimension of pretend is involved. The child can be a nonmovement item such as a chair, a table, a tree; or may be part of an item (e.g., one child is the tree, two children are the branches and four more are the leaves). Children can be movement items such as parts of a washing machine that is running, or one child can be a car, plane or rocking chair. Pantomime can also be movements such as touching toes, mopping floors and flying like birds. Pantomime can be done through the actions and words of a song or poem.

Role play is a form of dramatic play for young children.

Role play. This is a form of dramatic play for young children. It is an informal dramatization of a situation, problem, story or scene, and it offers action and dialogue that are spontaneous and creative. Spontaneity and informality encourage openness to exchange ideas and feelings among children. The teacher often is the leader in role play, setting the stage, initiating ideas, setting limits and guiding the discussion.

Fingerplays. These are a form of creative dramatic experience that are appropriate for the young child. This category includes songs, chants and rhymes. Children recite them as they physically act them out. The motoric actions, despite the term "fingerplay," are done with fingers, hands, legs and body movements.

Single-action poetry. Another type of early experience with creative dramatics is the recitation of poems. As children say the words, they act out the verses by performing appropriate actions. These often include large motor actions such as running, hopping and skipping. If children have difficulty reciting and acting at the same time, the poems can first be tape recorded and children can then do actions to their own taped voices.

Puppetry has many of the same benefits as role play for the child.

Puppetry. Many of the same benefits as role play are offered, except that the child is talking or acting through a puppet. Puppets encourage expression of ideas and provide an opportunity to observe and evaluate the behavior of others in a variety of roles. Children seem naturally attracted to puppets and are responsive to puppetry situations. As students depict situations through listening and interpreting behavior, they also discover that most human movements can be simulated by hand puppets (stretching, waving, sleeping, shaking the head yes or no, yawning, etc.).

Creative dramatic activities can be helpful in energizing the shy or

withdrawn child. Protected by props, scenery and/or characters, the child finds security in masking his or her identity while expressing thoughts and actions. It allows for the portrayal of male or female roles without loss of sexual identity. Opportunity is provided for children who may not excel academically, but have talent in creativity and spontaneity. Enactment of the same situations several times helps children see alternatives in problem solving and decision making. One also needs to be aware that children may become deeply involved in the creation of situations which call for adult support of their feelings and emotions.

If the focus is on the basic objective of creative dramatics for young children—a means of creative self-expression—observation will not lead to witnessing a group of young children tensely acting out a play in which lines have been memorized and then are delivered in a stilted and artificial manner.

Developing creative dramatics with kindergarten children assists the growth and learning of creative thinking and expression. With the varying forms of creative dramatics, children's bodies and minds and a variety of materials are the media through which they can effectively express themselves and create.

Creative Movement

Children learn to move and they move to learn. Through rhythmic movement activities, skills are developed without the threat of competition or embarrassment. Children can gain an awareness of their bodies, thus developing a positive self-concept and body image. Concepts of space, time, rhythm, flow, force and the world around them are enhanced as children use movement to interact with their environment. The total child is involved in the learning process. Neither skill nor creativity spring from meager experience.

Creative movement allows children to gain an awareness of their bodies, thus developing a positive self-concept and body image.

Rhythmic movement also has a health fitness value. One has only to take part in the skipping, running, galloping and animal rhythms of young children to be conscious of increased heart rate and its resulting stimulation of respiration and circulation. There is a strong link between this creative movement section and some of the purposes of the physical education program.

The rhythm or movement program can be divided into three categories which interact and reinforce one another:

- ☐ movement exploration
- ☐ creative rhythms
- ☐ singing games and folk dances

Guidelines for providing movement activities

The teacher sets the tone for the movement experiences by

- ☐ showing enthusiasm;
- ☐ selecting appropriate materials;
- ☐ discussing standards for safety (space where children can move) and control (when to start or stop an activity); and
- ☐ stimulating creative movement by the use of words, sounds, music, problems to solve and pictures.

The role of the teacher is to

- ☐ be certain that children understand what they are to do;
- ☐ provide opportunities for children to talk about what they are doing in movement;
- ☐ structure movement tasks for success, not failure;
- ☐ allow children to volunteer to show their movement ideas (children who are not ready for a leadership role should be given additional time to become comfortable);
- ☐ have children first try new movement activities to their own internal beat or tempo before imposing either;
- ☐ provide movement tasks which are bilaterally symmetrical (both sides of the body doing the same action) before movement tasks which use one side of the body alone (when incorporating movement tasks on one side of the body, repeat them on the other side—swing one arm, swing the other arm);
- ☐ provide movement for the upper body before movement for the lower body;
- ☐ provide many single movement tasks using one part of the body before moving different body parts at the same time;
- ☐ help children master individual movement tasks before presenting partner or group-coordinated movement activities;
- ☐ avoid specifying right or left until children have had many experiences choosing which side they want to move first and opportunities to identify which side they are moving;
- ☐ introduce basic movements which can be done with partners, combinations of movements, equipment, without equipment, imagination, an obstacle course and groups;
- ☐ help children to explore basic movements by changing direction, level, speed, force, range (big/small) and continuity; and
- ☐ provide props for creative movement so they can become extensions of the body (props can be used to transform the child into anything the child wants to become and help to develop imagination and provide a kind of security blanket for less secure children).

Movement exploration

Movement exploration brings out greater aesthetic appreciation and awareness.

Movement exploration provides obvious fitness and academic achievement benefits, but it also brings out greater aesthetic appreciation and awareness.

Movement exploration encourages boys and girls to be creative and to express whatever thoughts, feelings, experiences or ideas they have.

Movement exploration is an enjoyable experience in itself, but it also provides the basis for an easy and natural progression to folk, social and more organized dance forms.

Basic Movement Fundamentals

A. Body movements (nonlocomotor from a fixed base of sitting, standing and kneeling) explore parts of body used, levels, speeds and directions.
   - ☐ swinging
   - ☐ bending
   - ☐ stretching
   - ☐ pushing
   - ☐ pulling
   - ☐ twisting
   - ☐ dodging
   - ☐ striking
   - ☐ shaking

B. Locomotor movement
- ☐ propelling body through space using free movements such a crawling, creeping, walking, running, jumping and galloping

C. Combinations of locomotor movements
- ☐ skipping (step/hop on alternate feet)
- ☐ sliding (step/close)
- ☐ galloping (step/close/step one foot ahead of the other)

D. Combinations of movements
- ☐ series of locomotor movements (walking and leaping)
- ☐ series of body movements (bending and stretching, pushing and pulling)
- ☐ series of locomotor and body movements (jumping and bouncing, skipping and swinging, sliding and pushing, galloping and stretching)

In order for children to discover their capacity for movement and to understand movement, a series of interesting problems to solve will help them think, discuss and carry out experiments with movement. Ask questions such as:

- ☐ How can you be as tall as you want to be?
- ☐ What does it look like to be twisted?
- ☐ What does a curve look like? Show me with your body.
- ☐ Can you go in a different direction?
- ☐ How high or low can you go?

Locomotor movement. Cues given by the teacher could include:

- ☐ try to skip around the room without touching anyone (music or drumbeat for accompaniment);
- ☐ use a different kind of locomotor movement;
- ☐ try to gallop with a partner;
- ☐ can three of you gallop together;
- ☐ can you gallop in a circle;
- ☐ what different ways can you gallop together; and
- ☐ can you move in different directions to a drumbeat?

Axial and sustained movements. Cues given by the teacher could include:

- ☐ what have you seen that swings? (Show me!);
- ☐ try another thing that swings;
- ☐ can you swing one part of your body? (Two parts?);
- ☐ what different ways can you swing with a partner;
- ☐ what moves in a slow, steady way; and
- ☐ find your own space and when the music starts, move in a slow, steady way.

Combination of movements. Cues given by the teacher could include:

- ☐ try to skip and then twirl without touching anyone else;
- ☐ try to skip and then hop with a partner; and
- ☐ try to hop and then slide.

Creative rhythms

Observation of children's creative rhythmic patterns is important for teachers to consider as they plan for individual differences.

Creative rhythms recognize that each individual has his or her own rhythmic pattern of activity and inactivity. Observation of children's rhythmic patterns is important for teachers to consider as they plan for individual differences.

Creative rhythmic movement is a child's interpretation of thoughts and feelings expressed through the use of his or her body to music or to a beat. This medium of expression consists of moving to express and interpret in one's own way that which is within one's rhythmic experience. This type of movement differs from all other media of expression in that the body is an instrument of expression. When boys and girls are given the chance to express themselves through rhythmic experiences, they are fulfilling two fundamental and urgent needs of childhood: to move and to express.

When children explore movement and are aware of their bodies in space, they acquire tools and techniques for expression. They develop a means by which they can interpret, communicate and express themselves so others can understand them.

The following represent various progressions which can be used when teaching creative rhythms:

A. Responding to the rhythmic patterns of words:

- ☐ phrases or words are chosen (My name is Tom);
- ☐ words are repeated vocally to establish rhythm;
- ☐ those words or phrases are clapped to a beat; and
- ☐ half of the class may clap while the rest moves to the beat.

B. Responding to a drumbeat or handclap or rhythm:

- ☐ teacher beats drum using different patterns and tempos;
- ☐ children clap along with the beat;
- ☐ children tap their feet on the floor;
- ☐ children move creatively with the beat; and
- ☐ child beats a pattern behind the class or outside the room; class repeats the pattern as an echo.

C. Developing a creative rhythm:

- ☐ select a subject or topic or an object that would be meaningful to a child and create a rhythmic pattern to represent it. Examples are:
  - growing flowers;
  - riding a horse;
  - popping corn; and
  - flying an airplane.
- ☐ enrich movement activities with the use of rhythm instruments (drums, wood blocks, sand blocks, shakers, triangles, tambourines, sticks, cymbals and bells)
- ☐ creating from music
  1. select a record that is short and melodic;
  2. have children listen to the music, close their eyes and clap to the beat or move their arms to the flow of the music;
  3. discuss the kind of music they heard (fast, slow, happy, scary); or
  4. interpret or tell about the music with movement.
- ☐ creating from stories and poems
  1. act out a short story or a poem to a rhythm; or
  2. use story records for listening, verbalizing, then acting out in movement.

- ☐ creating with a parachute to various rhythms
  1. how many ways can it be moved?
     a. fast beat (ripples)
     b. slow beat (waves)
     c. choppy, uneven beat (like popcorn)
  2. toss a parachute up to a slow beat. Have some children creatively move to the beat underneath the parachute before it descends.

Singing games and dances

Dance experiences progress from basic movements to more complex singing games and folk, social and other dance forms. Some singing games and dance forms may be used in kindergarten, although they constitute a greater component of the movement program as children move into the primary grades. Singing games and folk dances are an important part of our cultural enjoyment. The basic dance steps are learned as a natural progression from movement explorative and creative rhythms. The vocabulary of movement takes on meaning as children sing games and learn folk dances.

Singing games and folk dances promote cultural enjoyment.

The songs should be learned before the children play the games. Basic movements (walking, running, hopping, skipping, sliding and galloping) may be combined in singing games. Folk dance steps represent the national culture of a country and the pattern is usually a combination of steps.

Examples of Singing Games for Kindergarten

Game	Movement
"A Hunting We will Go"	Slide, clap, march
"Bluebird"	Walk, weave
"Did You Ever See A Lassie?"	Walk, pantomime
"Farmer in the Dell"	Walk, pantomime
"Five Little Chickadees"	Walk
"Go Round the Village"	Walk
"I See You"	Bend, clap, skip
"Looby Loo"	Walk, bend, hand motions
"Muffin Man"	Skip

Music

Research into thought processes and learning has found that the auditory basis of speech and music is important to the development of children and crucial to the future musicality of the individual.

Music is important in providing experiences basic to general learning and future musical achievements.

The goals of music for early childhood, including kindergarten, may be viewed as twofold: (1) to provide experiences basic to general learning and (2) to provide the essential experiences for future musical achievements. In recognizing the importance of listening skills, speaking, aural, rhythmic and movement experiences for all children, the Music Education Advisory Committee of the Connecticut State Department of Education recommends the integration of music into the total curriculum for early childhood

programs. The committee recognizes that music integration is the responsibility of classroom teachers and recommends that these programs receive the services of certified music specialists.

> Music may be considered one of the self-evident values in the heritage of civilization. No culture has existed without some form of musical expression. The aesthetic needs of society have been amply documented in the writings of psychologists and anthropologists and in the abundance of musical works which reflect human character. Music, together with all the arts, shares a fundamental place in the educated mind; it is recognized as essential to the educational process.
>
> Connecticut State Department of Education, *Guide to Curriculum Development in the Arts*, 1981, page 107

Music creativity in the kindergarten

Kindergarten music experiences can encourage the sensitivity and willingness of the young to be open to new musical forms. Music experiences can foster natural curiosity and the desire in children to be expressive, both physically and mentally.

Programs for the very young are characterized by freedom, exploration and discovery of a world inquisitive minds find fascinating. The music curriculum for early years should be exploratory and sensitizing to stretch the young mind and imagination as well as the body, and to develop rudimentary skills in problem solving.

The music curriculum in kindergarten should stretch the young mind and help develop rudimentary skills in problem solving.

We must gently nurture children's music-making abilities without interfering with their musical spirits. We must focus our efforts on maintaining the child's spirit while refining his or her innate music potential. Since children are likely to derive greater pleasure from songs and musical games as their music-making skills improve, we must find a way to build children's musical spirits by nurturing their music-making abilities, for spirit and ability are partners in artistry. (Feierabend, 1988, p. 3)

According to the Association for Childhood Education International, the preschool and kindergarten child "sings short, simple songs, sometimes makes up a song, responds creatively to music with the whole body, plays out ideas with musical accompaniment, and experiments with rhythm instruments" (Ramsey, 1984). The creative and discovery aspects of classroom music too often are neglected and dominated by singing traditional materials, playing traditional games and listening to traditional music with an emphasis on social, utilitarian, holiday or seasonal activities.

Music and kindergarten classroom teachers have an opportunity to emphasize the exploration of sound through total body movement, manipulation of materials in an improvisatory manner and responding to the basic elements of music. While kindergarten teachers are clearly in the best position to involve children in daily music activities, they need help to develop materials, awareness and techniques to implement their own creative potential and that of their students. Music specialists are prepared to offer that assistance and to teach the basics of music.

Creative activities center around the exploration and manipulation of sound and music. All sound sources including the classroom itself may be utilized. The ticking of a clock and the sound of floor, tile, table or materials in the room may serve as texture colors for exploration. A box of sound-makers, as varied as possible, should be standard equipment for experimentation. Children can be encouraged to develop and collect sound sources of their own in order to develop a large vocabulary of clicks, knocks, rattles, jingles, etc. For music exploration, the classroom should contain a piano, bells, autoharp or other standard instruments of pitch. Specialized Orff instruments and materials available through educational music dealers could be put to excellent use in these early years. The tape recorder, with its infinite possibilities for manipulation and storage of sound, becomes essential music equipment for the kindergarten classroom. With or without sophisticated equipment, a rich set of materials for exploring sound is necessary for use by the children.

Classroom activity can be directed toward exploration of sound timbres through rhythmic accompaniments (a pulse that maintains a consistent tempo) created by the children for original or traditional music. This music might orchestrate mood, dramatic scenes, stories or basic elements of music—dynamic changes, phrase structures, returning themes, repeated sections, climax, thematic entrances, etc. With little encouragement children will operate freely in an instrumental sound-making environment, extending and refining the better aspects of rhythm instrument activity.

With little encouragement children will operate freely in an instrumental sound-making environment.

Vocal exploration is also welcomed by children. Making songs individually or in class is a time-tested and very successful procedure. Dramatizing with song and instrument is a natural activity. Vocal expression can join written and visual expression of classroom life. The fundamental nature and quality of physical, rhythmical and expressive body movements are emphasized in the literature of Orff, Dalcroze, eurythmics, dance theory and basic music education. Aural, visual and kinesthetic experience find integral relationship through body movement, which represents the felt experience of musical concepts. It remains the responsibility of the sensitive teacher to assist in creating awareness of music through movement.

Concepts of high-low, loud-soft, repetition and emerging structural and formal patterns may be demonstrated by teachers and children through the process of creative expression and demonstration. Elements of sound, pitch, timbre or rhythm can be perceived through verbal or visual means. Listening can be creative when overt behavior by the child is demonstrated in movement or response.

Teachers may realize an amazing new freedom to explore, discover, analyze, select with discrimination, evaluate and try again. The musical environment can be as broad as sound itself and can include all music of all places and times through manipulation of verbal, aural, visual, body, vocal and instrumental materials. Simple classroom techniques can be used by the nonmusician teacher. Musical activities such as moving to music, following musical events through listening, creating musical phrases, echoing rhythmic and melodic fragments and recalling music mentally can be encouraged by classroom teachers with the help of music specialists.

The intuitive foundation of the Dalcroze, Orff and Kodaly music education procedures, based on observation of children, has been reinforced by the research of Edwin Gordon and others. These procedures are well within the capabilities of the general kindergarten and early childhood classroom teacher. It is becoming apparent that these child-centered music activities should become a part of the repetoire of every teacher concerned with the total development of children. The significance of these speaking, listening and physical experiences for child development demands a prominent role in the kindergarten.

> Just as humus in nature makes growth possible, so elementary music gives to the child powers that cannot otherwise come to fruition. . . It is at the primary school age that the imagination must be stimulated; and opportunities for emotional development, which contain experience of the ability to feel, and the power to control the expression of the feeling, must also be provided. Everything that a child of this age experiences, everything in him that has been awakened and nurtured is a determining factor for the rest of his life. Much can be destroyed at this age that can never be retained, much can remain underdeveloped that can never be reclaimed.
>
> — Carl Orff, 1966

In recent years the creative potential for Carl Orff's Schulwerk has become recognized by music educators throughout the world. The richness of the classroom sounds of the Orff instruments, and the concept-developing procedures of the rote, rhythmic, verbal, improvisatory and physical features of the program which begins with sounds and concepts based on creative activity, are being used by an increasing number of music teachers in Connecticut.

Orff believes that music education should develop the child's ability to create his or her own music.

It is Orff's belief that music education should develop the child's ability to create his or her own music as an outgrowth of experiences in speaking, moving, singing, dancing and playing. According to Orff, children should be allowed to discover music for themselves, starting on a simple, almost primitive level. The child is led gradually from natural speech rhythm to rhythmic activities, to melodies and ostinatos growing out of rhythm patterns to simple harmony. "Rhythm precedes (and is stronger than) melody; melody precedes (and is stronger than) harmony," Orff said.

Spoken or recited rhythmic formulas, nursery rhymes, nonsense speech, children's names and similar material are reproduced by stamping, patting and clapping. The activities progress gradually toward second and third parts accompanied by speech canons, rhythmic exercises without words and simple patterns on instruments. Removal of unused tone bars from xylophone-like instruments presents an effective simplification for teaching.

Some of the Orff and Kodaly attributes, as influenced by the early work of Emile Jacques-Dalcroze, demonstrate their usefulness in the classroom. The Orff/Kodaly/Dalcroze principles:

- ☐ are child-centered;
- ☐ are appropriately childlike, building on the principles of natural play;
- ☐ are oriented to physical development and movement;
- ☐ are success-oriented, developing positive self-image through positive reinforcement;
- ☐ provide multiple modes for general classroom learning;
- ☐ lend themselves to integration with curriculum areas, especially with the other arts and physical education;
- ☐ are musical, providing for musical experiences of quality at all levels;
- ☐ are multifaceted and diverse; and
- ☐ are sensitizing in a desensitizing world.

As established by Gordon and others investigating his work, a research base confirms the importance of early childhood music experience. Gordon (1979) has demonstrated that audiation ability in young children (mentally hearing music which is not physically present) can decline if not used,

can be raised or maintained with practice, but stabilizes at about age 9 and never again can be raised to earlier levels of potential. Hence, future musical achievement is dependent upon providing young children with training and a challenging environment of aural experiences.

> Precisely because they wear the warmth and color of the senses, the arts are probably the strongest and deepest of the educative forces.
>
> — The Harvard Committee, 1945

Music audiation, or hearing music that is not physically present, as described by Gordon, is the basic skill necessary for all music understanding. One need only imagine "America" performed by voice, piano or orchestra to "audiate." Classroom skills in audiation can be described simply as:

- ☐ attending skills—the student is able to listen with attention to music for increasing lengths of time.
- ☐ discriminating skills—the student is able to recognize differences in musical elements and can focus on foreground or background elements in music.
- ☐ recalling skills—the student can recall something about music which has been heard, can repeat music and can perform patterns just heard.

Audiation involves remembering rhythmic and melodic fragments and can be improved in learning songs by rote, echoing rhythmic patterns and by similar exercises and games available through Orff/Kodaly and standard classroom materials. Orff emphasizes rhythmic speech, while rhythmically clapping, snapping fingers, patting thighs or stamping feet using the body and voice as rhythm instruments.

Musical notation and reading, while important to future musical learning, become secondary to audiation and physical experiences. Readiness experiences in simple left-to-right, high-low, long-short and other simple pre-notation concepts can become an important part of the kindergarten music training experience for the musical side of the two-goal program. Gordon reminds us not to rush through informal instruction. "For all children except possibly those with exceptionally high music aptitude, extended informal instruction is more beneficial than premature formal instruction in music." (Gordon, 1984, p. 26)

Gordon reminds us not to rush through informal instruction in music.

Music as a learning mode

John Feierabend of the University of Hartford, reporting on Gordon's music learning theory, reports that children should learn informally during the preschool/kindergarten years and should strive toward the ability to listen, audiate and vocally reproduce tonal (major and minor tonalities) and rhythmic patterns (duple and triple meters or two and three beats) with accuracy. These skills are the foundations upon which Gordon's learning theory proceeds.

There is a growing conviction that significant relationships exist between aural, physical and mental processes, that these relationships are vital to effective learning and that it is possible to validate modes of learning other

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than the linear-verbal emphasis now dominant in most schools (Gordon, 1984). Feierabend further reports that, where students receive Gordon's approach to music instruction, which includes singing and rhythmic movement from ages 5 to 9, audiation abilities appear to improve. Gordon believes, however, that audiation ability is innate and cannot be increased greater than the level with which the child is born. The increase in audiation scores in students from ages 5 to 9 who receive music instruction which includes singing and rhythmic movement experiences may be due to a partial return of the audiation ability that had atrophied from birth to age 5. Gordon concludes that the ability to audiate becomes stabilized at age 9. The arts have roots in the basic psyche of children and many other modes of human experience present alternate routes to the center of learning within the individual.

Feierabend suggests that the implications of Gordon's findings place tremendous responsibility on the early childhood music educator. Gordon has developed a learning theory which suggests strategies for helping children develop to their full potential (Gordon, 1984), among which are the following suggestions for influencing tonal development in the preschool/kindergarten years:

A. Play much recorded and/or live music

- ☐ use recordings with pleasant tone quality;
- ☐ use recordings without text, as the words distract the child from the music itself;
- ☐ use many recordings which will provide a variety of tempo and dynamic differences;
- ☐ allow children to listen to recordings they find enjoyable; and
- ☐ allow children to be attentive or nonattentive as they wish.

B. Sing or hum to a child with a pleasant tone quality

C. Encourage informal singing early

- ☐ never force a child to sing;
- ☐ do not correct mistakes in the early years;
- ☐ sung conversations encourage spontaneous singing; and
- ☐ encourage "a" response rather than "the" response.

In addition, Gordon offers the following suggestions to influence rhythmic development in the early childhood years:

A. Play much recorded and/or live music

- ☐ use a variety of recordings to provide contrasts in tempo and dynamics; and
- ☐ each individual recording should maintain a consistent tempo throughout.

B. Develop a feeling of pulse that maintains a consistent tempo

- ☐ experience pulse with body movement; and
- ☐ experience pulse with rhythm instruments.

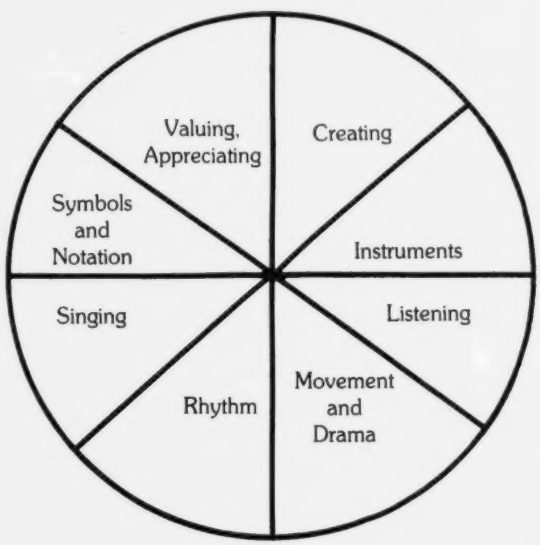
C. *Encourage informal movement early*

- ☐ provide opportunities to engage in large or small muscle movement with or without music;
- ☐ do not correct mistakes;
- ☐ encourage spontaneous movement with the use of rhythm instruments; and
- ☐ de-emphasize precise echo responses until after the child has emerged from the babble stage (period during which tonal and rhythmic attempts are made but not in a musical syntax understandable by an adult).

(John Feierabend, 1988)

A clever and practical example of the use of music and mathematics developed by a classroom teacher consists of colored paper triangles, squares, circles and rectangles picked randomly from a box by a student. After naming the shape and color, the child may select the appropriately-shaped instrument from another box of matching instruments. A simple chalkboard, single-line score notated with triangles, circles, squares and other shapes grouped in repetitive patterns by children or teacher provides a left-right visual score for instrumental ensembles. The children discriminate visually and aurally as they "play" the score on their respective instruments while achieving the following mathematical, language arts and musical concepts:

- ☐ identify shapes and colors
- ☐ recognize sets visually and aurally
- ☐ identify missing elements visually and aurally
- ☐ recognize disparate elements visually and aurally
- ☐ recognize "more than" visually and in sound
- ☐ read symbols
- ☐ read left to right
- ☐ enjoy musical score reading
- ☐ enjoy musical performance



Components of a Basic Music Program

Source: Connecticut State Department of Education. *A Guide to Curriculum Development in the Arts.* Hartford, CT: 1981, p. 133

Selected Music Competencies Appropriate for Kindergarten Children

(Prepared by the Music Education Advisory Committee of the Connecticut State Department of Education)

A. Singing

- ☐ match major and minor tonal patterns
- ☐ sing simple songs
- ☐ sing a repertoire of American and world songs

B. Music symbols and notation

- ☐ indicate melodic shape by contour lines
- ☐ recognize high and low on a musical staff
- ☐ recognize left to right movement of musical notation
- ☐ recognize high and low in musical notation

C. Rhythm

- ☐ maintain a steady pulse in performing simple music through duple and triple meters
- ☐ echo simple rhythm patterns (create speaking and dramatic compositions using voice and word sounds; begin with children's own names)
- ☐ participate in large muscle rhythmic activity while singing
- ☐ demonstrate awareness of tempo change

D. Listening

- ☐ differentiate high/low, loud/soft, fast/slow, short/long and musical timbres
- ☐ demonstrate perception of melodic phrasing
- ☐ demonstrate awareness of mood in music with appropriate response
- ☐ listen to music requiring active listening

E. Creating music

- ☐ create simple compositions (make up melodies and words)
- ☐ improvise rhythmic accompaniments, answer short phrases
- ☐ choose environmental sounds for a group composition
- ☐ make up verses, words, to know melodies
- ☐ create original body movement to music
- ☐ dramatize and interpret in response to music and text
- ☐ select appropriate instruments for accompaniment

F. Valuing music

- ☐ focus attention on music, participate in musical activities
- ☐ seek out musical pleasures
- ☐ listen attentively (listen to music to see how composers make music)
- ☐ discuss reactions to music
- ☐ be willing to participate in musical activities

G. Movement

- ☐ respond to music with appropriate body movement
- ☐ express contrast in music through movement
- ☐ demonstrate awareness of high/low, loud/soft, even/uneven, and tempo change in music through movement
- ☐ perform simple musical games and dances
- ☐ demonstrate simple rhythm patterns through movement

H. Instruments

- ☐ name popular musical instruments
- ☐ recognize change of musical timbre
- ☐ play simple classroom rhythm instruments
- ☐ select appropriate instrumental timbres for simple accompaniment or dramatic effects

Visual Arts

The goals of visual art in the kindergarten are to guide children in:

- ☐ developing rich, creative and expressive imaginations;
- ☐ using basic art skills, such as drawing, painting, cutting and pasting, constructing, modeling, weaving and sewing;
- ☐ increasing visual vocabulary for communicating through visual symbols, signs and images;
- ☐ looking at and talking about works of art (in the original or in reproduction); and
- ☐ using appropriate terms when identifying or talking about colors, types of art forms, art materials or works of art.

Research: stages of growth in visual art

Basic to all art is the ability to create visual symbols.

Basic to all art is the ability to create visual symbols. These visual symbols make up the visual vocabulary of the child, which represents the range of images and symbols the child can use to communicate ideas, abstract concepts, feelings about people and things; and to depict physical objects, and to express emotions. A child's ability to draw visual images develops in a natural process from uncontrolled scribbling (1½ to 2½ years), through the controlled scribbling stage (2½ to 3½ years), and the "name of scribble" stage (3½ to 4½ years). The name of scribble stage is important because it is here that children use their imaginations to give symbolic meaning to their visual configurations.

The ability to give meaning to a set of visual symbols is a right brain function. It may either precede or accompany the child's ability to give meaning to a set of verbal symbols, i.e., the alphabet. Usually, children pass through the scribble stages before entering kindergarten. But the kindergarten teacher should be familiar with these stages in order to recognize them in the work of children who have not yet developed beyond them. These children may need more opportunities to go through earlier developmental scribbling stages.

Most kindergarten children are in the pre-schematic stage (4-7 years) in drawing and are looking for a schema or symbols for depicting people, things, events and ideas. They are still egocentric, cannot identify with others' points of view and demonstrate this through their use of symbols and emotional placement of figures which tend to float in space on the paper. As children become more socio-centric, they begin to line up their images at the lower edge of the paper. They also add a line (called a baseline), representing the ground or the floor at the bottom of the paper for the figures to stand on. During the pre-schematic stage, the child's schema for the human figure (which was a circle with arms and legs—a tadpole man—at the naming of scribble stage) fills out, receives a torso or body, and the arms and legs are given their correct location on the body. The self-images of children are very easily identified in their drawings of the human figure. They include those body parts which have meaning to them (are a part of their active knowledge), and omit those parts which do not have meaning to them.

These stages of development in art have been researched and refined since they were first discovered in the child study movements of the 1890s. More recently they were refined by Lowenfeld in 1949 (Lowenfeld and Brittain, 1982), Kellogg in 1963 and Gardner in 1973.

Basic art skill: drawing

Drawing and writing are essentially the same basic skill. One differs from the other only in the nature of final configuration. Drawing leads to visual symbols; writing leads to verbal symbols. Except when doing calligraphy (an advanced skill), drawing has a more intricately controlled and refined line than do cursive writing and manuscript lettering. In this respect, any opportunities young children have for freehand drawing will strengthen their ability to do writing and lettering.

Drawing and writing also differ in the way they are taught. Handwriting and lettering are taught by having the child copy or imitate precise movements from alphabet charts. Drawing is taught by encouraging children to create their own visual images as an expression of their imagination and a representation of their natural art development. Each teaching method is appropriate for the symbol being learned. Art allows ambiguities in symbolism; writing does not. The methods for teaching either one can only hamper learning in the other, if they are used interchangeably.

Drawing is taught by encouraging children to create their own visual images.

Motivation. Kindergarten teachers do not need to know how to draw, but they should know how to motivate children to draw. Motivating children to draw is similar to motivating children to write a composition or tell a story. It is done by asking them to recall specific details, actions and feelings about an event. In art motivations, this is called activating passive knowledge. In addition to asking children questions, teachers should act out with children the activity they wish children to draw. The same topic may be assigned to the whole class, but each child will draw uniquely, depending on ability. The egocentricity of kindergarten children makes drawing about themselves excellent subject matter, and their own self-images and self-concepts are strengthened in doing so. Accordingly, every kindergarten should have a floor-length mirror so children can see themselves when they want to or use it for art motivations which include themselves.

One of the most effective and least restrictive methods for motivating children to draw is popularly called the Lowenfeld Motivation. This is a process of having children (and the teacher along with them) act out what the

teacher wants them to draw in a picture. Children are asked to draw particular body parts, types of action or human relationships, such as combing hair (hair), going upstairs (legs bending), playing with a toy (relationship with toy), shopping with mother or father (parental relationship), etc.

The main purposes for teaching or motivating children to draw are to strengthen their self-images and concepts about themselves and their environments and to develop drawing skills, artistic talents and abilities. The teacher activates a passive knowledge about these activities by asking them to recall visual details about how they comb their hair, brush their teeth or run up the steps at home. By recalling visual detail, children also exercise their visual memories and visual imagery. Such drawing activities help children grow out of the egocentric stage and into the socio-centric stage by encouraging them to relate to the events and people in the world around them.

Drawing activities can help children grow out of the egocentric stage.

Materials. For drawing, children should use crayons and felt-tip markers. Pencils often cause children to cramp down, tighten up and draw outlines which they fill in. Pencils are associated with writing. If pencils are used, they should be large with soft lead. Pencils and black crayons allow children to be expressive without the use of color. Use either 12- by 18-inch or 18- by 24-inch paper (newsprint, brush manila).

Basic art skill: painting

Children go through the same manipulative and experimental processes in learning to paint that they did in the scribble stages before drawing and writing. These stages are passed through more quickly since they already have mastered some of the psychomotor skills necessary for using tools (i.e., using crayons and pencils) when they apply them to painting and brush work. When working with paint children go through three phases:

- ☐ painting lines and shapes, mixing colors, putting colors next to each other and keeping open paper space;
- ☐ encountering the possibility of using representational figures for expression and emotion content (phase 2 configuration may be more like designs than figurative representation); and
- ☐ adding representational imagery in increasing complexity and organizing it logically in relation to the top, sides and bottom of the paper.

After representational figures (phase 3), children might paint the designs of phase 2, but it is a deliberate choice, not a regression. Between the ages of 5 and 6, they paint figures using geometrical shapes. As in drawing, they paint images along a baseline. To indicate interiors, they paint chairs and tables; to indicate exteriors, they add houses, trees, flowers, birds, etc. (See Smith, N., 1984.)

Motivation. The Lowenfeld Motivation also can be used for painting. To encourage or motivate painting, simple questions about applying lines, combining colors, or shapes and lines may be sufficient.

Materials. Painting is a more complex psychomotor skill than drawing. In drawing, a crayon is an extension of the hand. In painting, a brush is a tool which first must be dipped into paint before it makes its mark on the paper. Crayons can be put side by side without mixing, while paints can flow together to make unusual (and sometimes exciting) color changes.

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Stock Kindergarten Classrooms with the Following:

- ☐ One brush for each color of paint: Brushes should have long handles and short (but at least ¾-inch) bristles. (Let children move from color to color.)
- ☐ Poster tempera paints: bottles (not dry or powdered), thick for texture and dispensed by syrup or squeeze-top bottles. Essential colors are black, white and the primary colors of red, blue and yellow. Limit colors at first to primary colors. Add secondary colors next (orange, green, violet). Turquoise (blue-green) and magenta (red-violet) might be added from time to time.
- ☐ Watercolors: boxed sets of eight, with oval or whole (not half), pans and size 7 or 8 brushes, one set for each student.
- ☐ Easels: free standing (18 by 24 inches), with clips for paper and trays for jars of paint and brushes. Provide several for spontaneous use and free choice of activity.
- ☐ Paper: use 18- by 24-inch newsprint, brush manila, 60-pound white, sheets of newspaper (classified pages), or rolls of white butcher, brown wrapping, craft or duplex paper for murals and the painting around students for life-size portraits.

(Adapted from Smith, N., 1984)

Basic art skill: modeling and constructing

Modeling and constructing are more appropriate for kindergarten children than sculpture.

Sculpture is a process of carving and creating a three-dimensional image by subtracting (cutting away) from a form. Generally, sculpture is more advanced than kindergarten children can handle with ease. It requires sharp tools and utilizes a complex, analytical thinking process. For these reasons, modeling and constructing are more appropriate for kindergarten children. Modeling in clay also exercises a child's ability to analyze and synthesize. Constructing with paper, wood and cardboard provides synthesizing experiences.

Modeling. When children first encounter modeling clay, they experiment and manipulate it, pound it flat, roll it into snakes, snails, bracelets and little balls. They make bowls and put balls of fruit and bananas into them. They stretch the snakes out on the table and make pictures of houses and people. They pound some into cookies and draw faces into them with pencils. These all are phases similar to the scribble, naming of scribble and pre-schematic stages of drawing. The medium is different but the learning process is the same. Children pass through these stages quickly, because they have already mastered some skills of control and concepts of symbols in drawing and painting.

The purpose for modeling clay and construction work in kindergarten is to help children learn to think and visualize three-dimensionally. Drawing and painting are two-dimensional thinking processes. By using modeling clay, children also develop and refine their fine motor skills and tactile sense. Children who continue to make flat gingerbread or cookie people in clay and try to make them stand up are still thinking two-dimensionally. They should be given opportunities and motivations to stimulate their three-dimensional thinking, e.g., making winter scenes with snowmen.

Three approaches to modeling with clay. Given a ball of modeling clay, a child may use one of three approaches in working to make a human figure. First, the child may pull out the arms, legs and head but leave it as a single piece of clay, and use a pencil point to draw hair, poke in eyes and a nose or mouth. This is the analytical approach, with the child showing a mental orientation toward analyzing. In a second approach, the child may pull the ball of clay apart, roll several balls of different sizes and several little pieces like worms, and then reassemble them into a body of arms, legs, and head. This is a synthetical approach, with the child showing mental orientation toward synthesizing.

All approaches to modeling with clay are appropriate for children.

Neither approach is better than the other. Each demonstrates a specific mode of thinking. The analytical approach is a left-brain orientation; the synthesizing approach is a right-brain orientation. Insistence by the child on doing one or the other may indicate a strong direction in that way of responding to various aspects of learning. The third approach is a combination of the analytical and the synthetical. Most children may pull out parts of the body and synthesize other parts, add faces, noses, etc. These two processes are part of a continuum, not a dichotomy, and should not be thought of in either/or terms.

Motivation. Students might first be given modeling clay and asked to "see what you can do with it." By observing what children do with the clay, teachers can determine where they are developmentally, in terms of three-dimensional thinking, and perhaps which mode of thinking they prefer. To encourage three-dimensional thinking, teachers might ask students to make the figures stand up. If they don't stand up, ask, "What do people need in order to stand up? Do they need strong legs? How can you make the legs stronger?" For motivation, you might play Simon Says: "Simon Says, make a person standing up with hands on hips, without a brace in the back." A day or so after a drawing activity, teachers might have children model their drawings in clay. Suggested actions could be: "I am brushing my teeth, ...combing my hair, ...pledging the flag" (left, right-hand orientation, etc.). In this way, each activity reinforces the other in helping children to learn body concepts. Teachers also might divide the children into groups and have them model figures playing a game of baseball, football or basketball. Figures can be arranged for a tabletop scene on pieces of 18- by 24-inch newsprint. Large diagrams representing the baseball diamond, football field or basketball court might be drawn on the paper in crayon by the teacher.

Constructions. Since images are made by adding to the original forms and shapes, modeling is a form of construction. Other construction activities, such as having children build a free form with folded, cut and curled paper which can stand up by itself, provide three-dimensional problem-solving activities. Such sculptural or architectural forms, without actually being representational, can prepare the child for solving problems related to architecture and sculpture in later grades. Children may glue, paste, staple or tape the figures on a base made of oaktag. Toothpicks and straws, with Styrofoam balls or Tinkertoys, etc., are also good construction materials.

Materials. Modeling clay is an oil-based clay. It hardens when cold, softens with warmth from the hands and can be used over and over again, making it economical. By reusing modeling clay, the emphasis is placed on the process rather than the product, because the product is rolled back into the ball for reuse. Unlike hardening or firing clay, which is water based, modeling clay does not dry out and cannot be fired in a kiln. Nevertheless, it prepares children for future use of drying and firing clay and more advanced work. Play-doh, Plasticine and Plastilene are popular brands of modeling clay. Although Play-doh technically is not a modeling clay, it has similar properties and characteristics. Modeling clays for school use, such

as Plasticine and Plastilene, come in one-pound boxes consisting of quarter-pound cubes. Each student could have one quarter-pound ball of modeling clay and keep it in a half-pint milk carton for free choice use. Additional balls of modeling clay can be stored in a covered bucket.

Modeling clay comes in several colors and children might use the different colors for indicating clothes, buttons, flowers, etc. When mixed together, the colors look less attractive than modeling clay of one color. But when limited to primary colors, this approach provides a color-mixing experience. The modeling clays mentioned here have ingredients which prevent the spread of germs when used over and over by different children, and they also are nontoxic.

Basic art skill: looking at and talking about art

Looking at and talking about art are the first steps in art history and art criticism.

The first steps in art history and art criticism can begin in the kindergarten by having children look at and talk about works of art or art reproductions. Art works, art prints and art reproductions have an advantage over slides and filmstrips at the kindergarten level. They can be looked at over and over again and children can develop a friendship with them. Most advanced concepts of art criticism and art history can be taught later from the same works of art.

The subject matter for art reproductions may be children, adults, families, people at work or play or with pets, animals, geometrical shapes and designs (abstract, nonobjective art), scenes or everyday activities in the present and the past or subjects related to other areas being taught. School art reproduction programs usually feature commentary or materials to assist teachers in talking about works of art or preparing questions for students. Art reproductions have on them the name of the artist and picture, the dates of the artist's life and usually where the original work is located. It may be useful when preparing or mounting art reproductions to attach a sheet of paper with that information, together with suggested questions or specific purposes for using that particular work. Kindergarten teachers do not need to know a lot about art and art history to teach children to look at works of art, but it helps to know something about the particular objects they choose to talk about.

Motivation. To introduce students to a work of art, first bring them and the art work (or reproduction) close together. Let them see it, feel it or smell it, if necessary. Sit at their level. Have them sit around you and move the art work toward them or from side to side so all can see it as you get them to talk about it. The secret of getting children interested in art is to have them talk about it by asking open-ended questions. Let them find the answers or argue and explore what they see or think they see. If the teacher wants to deal with certain aspects of the work, information can be given at an appropriate point in the discussion. Open-ended or divergent questions (those that have many possible answers) are better than close-ended or convergent questions (those that have only one answer) for encouraging children to join in discussion. Two types of questions are good for starting discussion about a work of art or reproduction. The nondirected approach is a good opening and exercises a general visual perceptual ability. It consists of asking one question, as in a Socratic dialogue, in response to the various replies from the students and then asking more questions. Each time a question is asked, descriptive vocabularies and perception are clarified.

For example:

Renoir: *Girl With Watering Can*

Teacher: "What do you see in this painting?"
Students: A girl...colors...flowers...
Teacher: "Can you tell me about the girl or what the girl is doing?"
Students: "She's holding a watering can. She's wearing a blue dress.."
Teacher: "Can you describe the can?" (You choose which answer you want to respond to in terms of the direction in which you want the dialogue to go. Continue this until all aspects of the picture you want to deal with have been covered.)

The directed approach usually refers to a particular thing about the work of art. It may be used in relation to other topics you are studying or the purpose for which you chose that particular work. Directed questions help get the students to the point of the lesson more quickly than the non-directed approach.

An example follows:

Edward Hicks: *The Peaceable Kingdom*

Opening Question: "We have been studying domestic and wild animals. What does this painting show us about wild and domestic animals?" (Or more directed, "Which animals are domestic?")
Students: The goat...the cow...the lamb...
Teacher: "Which animals are wild?"
Students: The lion...the tiger...that's a leopard...
Teacher: "What do you notice about the wild animals?"

This method of questioning can be used at any grade level. At times the teacher may want to tell the students something specific, but by this time they will be interested enough that the teacher need not do all the talking.

Materials. Art reproductions are sold through various distributors and through planned school programs. Planned programs usually include groups of art reproductions under specific topics and subject matter and have suggestions for teaching. Large reproductions, or art prints, about 20 or 22 by 28 inches, are standard. They can be purchased full color, on heavy paper, mounted on cardboard or laminated in plastic, depending on the publisher.

School districts with drymount facilities have found it more economical to mount their own. Smaller reproductions about 10 by 12 by 15 inches also are available from companies. These sometimes are sold in sets with enough postcard-size reproductions of the same art works that each child can have his or her own to use. The methods for full class work described above favor the use of the larger size reproductions.

Collage and montage. As art forms, the collage and montage have their origins in the modern art movements of the early 20th century. The collage had its origins in cubism and the montage in surrealism. They are, however, appropriate for kindergarten.

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A collage (from the French words, "to paste") consists of a variety of materials, textures, fabrics and found objects that have been organized into a design, sometimes conveying a visual state or idea related to a particular theme. The materials can be glued, pasted, sewn, laced or otherwise secured to a background, e.g., cardboard or tag board. A montage is similar to a collage, but consists only of pictures and photographs.

Making collages and montages gives children opportunities to explore materials and their relationships, to cut and shape and to experiment with methods of adhering various surfaces and materials together using paste, glue, needles and thread, staples, paper clips, yarns and hole punches for lacing, tape, etc.

Collage and montage making also encourages children to use flexible and fluent mental processes, to delay decision making and to analyze interrelationships of textures, colors and shapes. To focus on these mental processes, students should be encouraged to move their pieces around, add some, take some away and delay a decision until they are ready to paste or glue all the elements. Kindergarten children are very spontaneous. After they finish, teachers might discuss their designs and decisions with them.

Puppets. Hand puppets are particularly appropriate for kindergarten children. Finger puppets and stick puppets might be made first, followed by small brown paper bag puppets with faces cut from paper, or even sock hand puppets. The importance of puppetry is in using them to act out stories. A screen, a table or any sort of frame can be used to create a stage. Each child can name and give a puppet character, then join with two or three others to make up a story.

Art and reading. Reading may be viewed as a generic term, as in being able to read visual signs and symbols as well as verbal and numerical signs and symbols. Assisting children in learning to read and interpret visual signs, symbols or images, and increasing their visual vocabularies through art is as much a part of the reading program as is developing verbal reading skills. Their visual vocabularies should be expanded as they advance into the upper grades rather than allowed to atrophy through neglect.

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AHO-28 —What's Wrong with Coloring Books?

2

Investigating Foreign Languages

Investigating Foreign Languages 2

Foreign languages are all around us, yet it is uncommon to see a section on foreign language learning in an early childhood program guide. Growing evidence indicates that learning another language and coming to understand other cultures should be of concern to parents and teachers of young children. Research shows that it is appropriate to offer such opportunities to kindergarten children and that these experiences may easily be integrated with other areas of learning. This chapter on foreign language learning is being presented as a critical area to consider and investigate further. Children are growing up in a society which bombards them with pictures, words, actions and ideas that are truly of an international nature.

The ability to communicate in a language other than English is extremely important.

The ability to communicate in a language other than English is extremely important for United States citizens. Success in today's world depends to a great extent on our capacity to understand other cultures and our ability to communicate with others in the world in their own languages. Several national reports have stated that our prosperity and security depend on the degree to which we can improve our competence in these areas: American business stands to lose markets to foreign competitors; our scholars and scientists do not have ready access to foreign research; international government affairs are conducted in partial or total ignorance of the thinking and behavioral patterns of other countries. Yet, foreign language learning generally is given a low priority in our public schools.

If the understanding and skill which foreign language study can offer are critical for all U.S. citizens, all students should have a chance to develop them. A report to the U.S. secretary of education recommends: "Local school districts should provide every student with the opportunity to begin the study of a foreign language in the earliest years of formal education and to continue study of the same language until a functionally useful level of measured proficiency has been achieved" (National Advisory Board on International Education Programs, 1984, p. 9). Since public school programs in Connecticut begin with kindergarten, the seeds of foreign language learning should be sown at that level.

Before proceeding with further suggestions about foreign language learning, it may be appropriate to give some background information concerning the related fields of bilingual education and English for speakers of other languages. Contrary to popular usage, children in need of bilingual education are not bilingual. They are either non-English speakers or have a very limited command of English. In bilingual programs, children receive special help in learning English while some of their interaction with the teacher and other students takes place in their native language. Bilingual education, therefore, means learning through the medium of two languages. Most bilingual education programs in Connecticut do not try to maintain and improve a child's native language skill. The goal is to move the student as quickly as possible into an all-English mode of learning.

English for speakers of other languages (ESOL) programs take little account of a child's native language. Learners in groups studying ESOL often are from many language backgrounds and the teacher would find it impossible to communicate with the children in any common language other than English. However, a teacher skilled in providing instruction in English to children who do not already understand and speak it is an invaluable asset in accelerating the rate at which students will master the new language. It is interesting to note that both bilingual programs and

programs of English for speakers of other languages reflect the general opinion that it is not important to preserve the native (foreign) language skill which students already have when they come to kindergarten to begin their schooling.

Current research implications

Penfield concluded that 'the mother's method' is a valuable language learning experience.

Research reported by neurosurgeon Wilder Penfield 20 years ago has not yet adequately influenced common educational practice in the United States. He asserted that a method of teaching a second language which involves teaching a child to understand and to use a few hundred words ("the mother's method") is a valuable experience. "The mother's method of direct language teaching can be used for second languages but this should begin before the age of 6 or 8 if possible. When the uncommitted cortex is thus conditioned early, the individual becomes a better linguist; the child is better prepared for the long educational climb." (Penfield, 1965, p. 797)

Another research area of great interest to program developers for early elementary grades concerns immersion education. In a total immersion program, native speakers of the majority language begin their formal education by receiving all instruction in a second language. This program was initiated in 1965 in St. Lambert, Canada, and all curriculum instruction, beginning in kindergarten and continuing through the primary grades, was taught through French. The goals of the program were:

- ☐ to provide the participating children with functional competence in both written and spoken aspects of French;
- ☐ to promote and maintain normal levels of English language development;
- ☐ to ensure achievement in academic subjects commensurate with students' academic abilities and grade levels; and
- ☐ to instill in the children an understanding and appreciation of French Canadians, their language and culture without detracting in any way from the students' identity with and appreciation for English-Canadian culture.

(Genesee, 1984)

Evaluation shows that the St. Lambert experiment worked. Children achieved high levels of proficiency, suffered no long-term deficit in academic achievement and expressed positive attitudes toward French speakers while maintaining a healthy self-identity and appreciation for their own linguistic and cultural membership. The positive results excited interest in U.S. communities and a survey in 1983 shows 12 major school districts from coast to coast involved in total or partial immersion programs. (Campbell, 1984)

Results of these programs show consistently that children in immersion programs perform at least as well as children in regular programs in academic achievement. They also have a broader sociocultural perspective of themselves and of representatives of at least one other ethnic group, make substantial progress toward acquisition of a foreign language and show some broader understanding and flexibility in linguistic performance.

Given these research findings, what are the implications for program planners at kindergarten and primary levels? First, the early years of school are the proper time to initiate the foreign language program. To catch the best time for exposing children to another language, we should start before age 6. Not only will this provide an opportunity for more children to develop language learning aptitude, but there is evidence children will develop a better sense of the nature of language. By beginning second

language study in kindergarten, there also is a chance to provide a sufficient number of hours of instruction in Grades K-12 for students to develop functional proficiency in speaking the language. Contrary to conventional wisdom, children who spend time studying a second language in the primary grades do not suffer a loss in other academic subjects, nor do they confuse the other language with their native language.

Time spent studying a second language does not cause loss in other academic subjects.

The type of second language instruction which yields the most dramatic results is early total immersion. Programs in which children receive all instruction, starting in kindergarten, via a second language have demonstrated that students will develop a solid beginning of mastery of the second language by Grade 6 and also will have assumed some positive attitudes toward another language and culture. Acceptance of the validity of another way of looking at life is the most crucial aspect of multicultural education.

Although total immersion programs attract much interest because of the results they demonstrate and because they are such a radical departure from the normal routine in U.S. public schools, partial immersion and long sequences incorporating short periods of foreign language learning experiences also yield valuable results. Foreign language instruction in Grades K-12 serves the national interest by increasing the number of people with proficiency in a second language and understanding of other cultures. It serves the interests of the children themselves by increasing their aptitudes for learning and by providing them with skills which will be marketable when they look for jobs. It is in everyone's interest to begin second language study in kindergarten and continue it throughout the child's formal schooling.

Research has shown that young children who are learning two languages at once do not have serious problems in confusing the two. But more attention must be given to potential difficulties which could arise in a classroom where children are receiving instruction in the second language for just a small part of the day. The 4- or 5-year-old child will have little concept of what a foreign language is. To help the child establish an understanding that different sets of sounds, words and rules are used in the second language, it is important that use of that language be identified with a certain person, a certain portion of the day or a certain area of the classroom. To identify and separate firmly the second language system, a combination of these practices may be desirable.

Young children who are learning two languages at once do not have serious problems in confusing the two.

Many teachers find it fascinating that children of kindergarten age learn foreign languages quickly. Since they learn what they hear, the language model presented by the teacher must be authentic and the instructional material chosen must present information which is culturally authentic. Young children do not have a "critical screen" which will assist them in detecting that their French teacher has a strong American accent or that the picture of an American loaf of bread which the teacher has labeled as "pain" is really unrelated to the kind of long, cylindrical loaf of bread that they could see in France. Similarly, an American supermarket should not bear the title "supermercado," since the equivalent place in Spain looks very little like the U.S. version. It is critical that children be presented with accurate models of both language and culture. This has obvious implications for the kindergarten teacher. If the teacher is not fluent in the language the children are learning, a specialist is needed to provide the actual language models. However, just as the teacher does not need to be a vocal music specialist to lead children in singing, neither does he or she have to be a native speaker of a foreign language to assist children in practicing the language in songs, games, skits, etc. The kindergarten teacher, with practice, can learn a limited amount of material to use with the children between visits by a specialist. It is important that the kindergarten teacher be a learner-participant in the foreign language lessons the children receive from the specialist.

The teacher should present authentic language models and instructional materials.

Foreign language instruction should be characterized by much more listening than speaking in the earliest years.

A regular K-12 sequence of foreign language instruction should be characterized by much more listening than speaking in the earliest years. Children's responses will be mostly in the form of actions. Active games like Simon Says which require that students demonstrate their understanding of the spoken word in the foreign language by their behavior are appropriate. Any spoken responses should be of very limited length. As they advance in understanding over a year's study, the language teacher may expect them to follow directions which are more extensive. That is not to say children would be prohibited from trying to speak the language; they should be encouraged to experiment. Nor does this principle of teaching mostly listening comprehension mean children will not be taught to pronounce syllables and words; such activity will aid in understanding. However, children should not be forced to speak extensively during their kindergarten experience, nor should the development of speaking skill be a primary goal of instruction during this time.

Suggested Activities for the Foreign Language and Kindergarten Teacher

☐ Foreign Language Teacher:
- — introduces salutations
  "Bonjour, la classe."
  "Bonjour, Pierre."
- — if a customary handshake or action goes along with this greeting, the teacher acts it out with the children, greeting each one individually.
- — encourages children to repeat the salutation and to use it with one another.
- — uses hand puppets to further practice greeting the class and individuals.

☐ Kindergarten Teacher:
- — greets his or her class the next day with, "Bonjour, la classe."
- — adds, "Au revoir" at the end of the day.

☐ Foreign Language Teacher:
- — introduces colors in the same sequence in which the kindergarten teacher is introducing or reviewing them in English.
- — uses a balloon to introduce the name of the color in the foreign language.
- — as soon as the children have practiced saying the color, the teacher seats them in a circle to play "Balloon Rouge" (red balloon). Children pass the balloon to their left or right while singing (to any tune), "Ballon rouge, ballon rouge, Joli ballon rouge. Ballon rouge, ballon rouge, où vas-tu?"
- — the child left holding the balloon gets to decide the direction (left or right) in which to pass the balloon and starts the next round of the same song. Once several colors are learned, this child may also choose a balloon of a different color.

- ☐ Kindergarten Teacher:
  - — may choose to play this with his or her class.
  - — plays the game at recess with the children, providing balls of the appropriate colors.

- ☐ The foreign language teacher may introduce and practice the following two activities with the children and the kindergarten teacher may do them with the class on his or her own after the specialist has left:
  - — game: "What's missing?" (Qu'est-ce qui manque?) This may be played with flash cards or numbers, colors, clothing, foods, animals or any foreign language vocabulary the teacher has already taught. The teacher should have flash cards lined up along the blackboard and tell children: "Cover your eyes!" then: "Look!" Then ask: "What's missing?" (One response per child.) The teacher should then take away one, some and eventually all of the flash cards.
  - — tap a number: The teacher should ask for quiet and explain to the class that he or she (the teacher) is going to tap a number. The teacher should then ask students to raise their hands when they know what number has been tapped. This activity can be varied by clapping a number, snapping a number, jumping or hopping a number and by having the class "do" a number the teacher says.

- ☐ Foreign Language Teacher:
  - — introduces simple holiday vocabulary for a day such as Thanksgiving in a foreign country where the language is spoken. There may be colors associated with the holiday, certain foods or perhaps short phrases which are characteristic of the celebration.

- ☐ Kindergarten Teacher:
  - — fills in all of the content about the celebration of the holiday in the foreign country (customs, foods, etc.). This will be done in English.

Learning a foreign language is a procedure that requires assistance from a teacher who is an expert in the field. If there is no specialist in place within the elementary school or school system, a parent or other resident of the community who is fluent in the language may link up with the kindergarten teacher to help. A retired teacher or a foreign language teacher from the secondary grades are among those who might be asked for assistance. The bottom line is that the kindergarten teacher and a foreign language resource person must work closely together, sharing and drawing upon their particular areas of expertise in order to:

A parent or other community member who is fluent in the language may assist the kindergarten teacher in providing language instruction.

- ☐ decide curriculum content and
- ☐ establish a comfort level for the kindergarten teacher when dealing with the foreign language.

A kindergarten teacher without the aid of a specialist should concentrate on activities that are aimed at learning about foreign languages. The regular classroom teacher can provide visual and aural clues to other languages, expanding the child's awareness of other systems of communication (languages) and other ways of behaving (cultures). The teacher with speakers of languages other than English in the classroom has a rich, built-in resource for such demonstrations. Periodicals produced in a foreign culture yield many examples of language and culture which are different from what many children experience at home. Video and audio tapes can serve as a source of songs and games in which children may participate as their counterparts would in a foreign country. All such activities can make a significant contribution toward preparing the child to begin learning a foreign language when the appropriate resources are provided by a board of education.

The kindergarten teacher may make the most important contributions to the foreign language program by raising the level of consciousness of his or her students through enthusiasm, encouragement and participation, even when it can only be done in English.

Foreign languages are fun. Children of kindergarten age may be the best demonstrators of the fun of language learning. They have no preconceived notions that it is hard. They accept new frames of reference for their thinking and behavior. They make learning a foreign language a joy for their teachers as well as for themselves.

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Communicating Through Language Arts 3

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The ability to understand and use the spoken and written forms of language is crucial to learning in all other areas. Language ability affects not only intellectual development and academic achievement in other content areas, but the child's emotional and social development as well. It is, therefore, critical for children to develop speaking, listening, reading and writing skills.

The process of acquiring spoken and written language starts long before children begin kindergarten and will continue throughout their lives. The kindergarten year is but one interval in a developmental sequence and the classroom is but one setting in which language learning occurs. Thus, the language arts experiences in kindergarten will be most successful and effective if they provide continuity with previous language acquisition and with language experiences at home.

Because spoken and written language skills interact with and influence each other, the importance of integrating both in the kindergarten classroom cannot be overemphasized. However, since reading has become a major concern of parents and teachers of young children, in this chapter we will separate the language arts into their spoken and written forms.

Oral communication: speaking and listening

Several components are involved in the skillful use of oral language. Children must acquire **vocabulary** by learning the words and phrases that stand for the objects, actions, ideas and feelings they want to express. They must develop accurate, intelligible speech. They must learn **syntax,** the ability to speak in sentences according to the rules of the language. **Pragmatics,** the organization and expression of thoughts so that others can understand one's meaning, must also be mastered. Finally, children need to develop ease and confidence in communicating to a group.

In addition, children must develop receptive language skills, the ability to listen and to comprehend what they hear. Beyond the physical ability to hear, children need to choose selectively from the sounds in the environment. Listening is influenced by factors such as motivation, context and the complexity of materials.

The study of childen's language development spans a full century and reflects more general theories of learning. One theory of language acquisition is based upon behaviorist principles. According to this theory, language develops through the processes of selective reinforcement and imitation. Adults in the child's environment provide reinforcement of the child's approximations of sounds that are part of the native language. Language forms are learned through imitating sentences. Although this theory is logical, it cannot explain the characteristics of children's language that linguists have observed. For example, children often overgeneralize language rules, creating forms not heard or reinforced in their environment. Nevertheless, the behaviorist theories about language acquisition are the basis for many language programs in schools today.

Over the last two decades, linguistic studies have given impetus and support to theories that view language learning from an interactionist perspective. The theories of Noam Chomsky and Eric Lenneberg, which

now are regarded as most valid, view language learning as a constructive process in which children create rules about language from what they have heard. Responses received allow refinement and elaboration of language. These theorists argue that children learn to talk beginning at birth, not through instruction in the usual sense, but rather by being immersed in an environment in which language is directed to them. The child formulates, tries out and revises ideas about the phonetic, semantic, syntactic and pragmatic systems experienced in the language environment. During the child's first six years, language emerges in discernible levels of development; the kindergarten child is an experienced language learner and user.

Goals in Oral Language Learning

1. Involve each child in speaking and listening activities.
2. Develop a rich and varied speaking vocabulary.
3. Enhance abilities in clear and complete expression.
4. Provide varied opportunities to experience language.
5. Develop listening skills.
6. Enhance self-esteem while meeting language-learning needs.
7. Foster aptitudes for language learning.

Research, implications and recommended practices. In the pages that follow, we will consider seven major principles of oral language learning derived from current research, including the implications of these principles for early childhood education and samples of recommended practices.

Principle 1

Language develops in a context of meaningful, personalized and natural communication. (3, 4, 7, 8)*

Goal

To involve each child in speaking and listening experiences.

Examples

- ☐ Each day, Richard excitedly tells his teacher about his walk to school.
- ☐ Mike quietly holds a new Matchbox car in his hand until his teacher notices it. Then, in response to her interest, he begins to tell her about it.

Implication

Conversations between teacher and child and between children should be a priority in the kindergarten.

Recommendations

- ☐ Use the activity period when children are engaged in individual and small group play as a time to talk with children.
- ☐ Provide play experiences such as dramatic play, blocks and puppets which elicit talking among children.
- ☐ Be a good listener as well as a good talker.

*References for this section on oral communication are given by numbers keyed to a reference list that appears on page 55.

Principle 2

Between the ages of 1 and 6, children acquire new words at an average rate of four per day. Providing the words to describe what children are experiencing and correcting their labeling errors are effective ways of increasing vocabulary. (1, 3, 4, 7)

Goal

To develop a rich and varied speaking vocabulary.

Examples

- ☐ As Sarah uses the water pump for the first time, her teacher tells her its name and they talk about the way the water fills the pump and gushes out in spurts.
- ☐ "I put it over there!" explains Steve to his friend Joshua. "Can you tell Joshua where you put the paint brush?" encourages his teacher. "Did you put it next to the sink or on the easel?"

Implication

Teachers should provide accurate words to extend children's abilities to express their experiences and meanings.

Recommendations

- ☐ Provide a mystery box containing objects which children can describe and identify.
- ☐ Make picture books based on a category by labeling pictures found in magazines.
- ☐ Take field trips around the school, neighborhood or more distant places and provide related special vocabulary as you talk with the children.
- ☐ Discuss snack foods using precise terms such as *fresh* or *canned* pears.
- ☐ Sing songs such as "The Wheels on the Bus," in which children can substitute words.
- ☐ Talk about any unusual words and ask children to give other words with similar meanings as you read to them.

Principle 3

Children's grammatical errors are due to the overgeneralization of rules. There are only certain periods in development in which the child is sensitive to discrepancies between what they say and the correct form. (1, 3, 4, 7)

Goal

To enhance children's abilities to express themselves clearly and completely.

Examples

- ☐ "I goed to the park with my brother!" Lara shares at group time.
- ☐ "We have four new mouses in the cage!" exclaims Manuel.

Implication

Children need to hear correct language forms, but immediate correction of their errors is usually not effective.

Recommendations

- ☐ Expose children to mature language forms through informal conversation, stories and songs.
- ☐ Repeat a child's incorrect sentence in question or statement form, using the correct form. Use a conversational tone and vocally stress the correct form. If the child says, "I goed to the library," respond with, "Oh, you went to the library? The library has some new books."

Principle 4

Richness and variety in the language the child hears produce the greatest language gains. (1, 3, 4)

Goal

To provide varied opportunities to experience language.

Examples

- ☐ The entire class joins in as the teacher reads the refrain: "Hundreds of cats, thousands of cats, millions and billions and trillions of cats."
- ☐ As they spread the finger paint around their papers, the children talk with each other about how it looks and feels.

(**Principle 4** continued on next page)

Principle 4 (continued)

Implication

Children should hear language in varied and enriched forms.

Recommendations

- ☐ Talk with children as they play, expanding on the content as well as the form of their sentences. For example, in dramatic play a child might say, "Eat!" while the teacher may respond, "It's time to eat dinner. That turkey smells delicious!"
- ☐ Use poetry, music, riddles, books and storytelling to expose children to a variety of language forms.

Principle 5

Levels of listening have been classified as marginal, appreciative, attentive and analytical. (6)

Goal

To develop children's listening skills.

Examples

- ☐ Samantha listens intently as Luke explains how to work the walkie-talkies in their pretend spaceship.
- ☐ Nicholas sways gently from side to side as he listens to a recording of "Peter and the Wolf."

Implication

Children need listening experiences for different purposes and with varying degrees of depth.

Recommendations

- ☐ Occasionally call attention to background sounds.
- ☐ Provide background music during some activities.
- ☐ Encourage children to ask questions as they listen.
- ☐ Give children a purpose for listening; something specific to listen for.
- ☐ Ask children to identify sounds outdoors or on tapes.
- ☐ Have children duplicate a pattern of claps or drum beats.
- ☐ Have children match containers which sound the same when shaken.
- ☐ Play Simon Says.
- ☐ Follow up stories and songs with questions about the content.
- ☐ Give a sequence of three directions for children to follow.

Principle 6

Children bring to school language differences based on individual development, culture and dialects and/or languages other than English. (3, 5)

Goal

To enhance children's self-esteem while meeting their language-learning needs.

Examples

- ☐ As Maria helps the teacher to make tacos for a snack, they talk about the Spanish and English names for the ingredients.
- ☐ Jed is not self-conscious about dramatizing the part of the Gingerbread Man, even though he substitutes a W sound for an R sound in his speech. "Run, run, as fast as you can. You can't catch me, I'm the Gingerbread Man!" he shouts.

Implication

Children need to develop their abilities to understand and use standard English in a context of respect for their present language and their total development.

Recommendations

- ☐ Provide experiences with standard English within a total developmental and interactive program.
- ☐ Develop bilingual and bicultural programs to foster positive self-concept and language development by focusing on the child's first language while providing exposure to English.

Principle 7	Young children who have been immersed in a second language progress substantially in acquiring the new language while maintaining proficiency in English and academic achievement. (2)
Goal	To foster children's aptitudes for language learning.
Examples	☐ Jill has learned to sing both "Frere Jacques" in French and "Are You Sleeping?" in English. ☐ Elena and Sally count out the cups for a snack in English and the napkins in Spanish.
Implication	Kindergarten children can benefit from systematic exposure to a foreign language.
Recommendation	☐ Provide children with partial immersion or short periods of daily instruction in a second language.

Emerging literacy: reading and writing

The issue of reading in the kindergarten might be considered the new "great debate" in reading education, second only to the phonics versus sight words controversy of the 1960s. Increasingly, parents and some educators expect that systematic reading instruction will begin in kindergarten. As learning experiences have increased through "Sesame Street," prekindergarten programs and experiences at home, more children have been introduced to some aspects of reading before kindergarten. The question of whether or not to include reading in kindergarten is no longer the issue. The question is: What kind of appropriate reading experiences should be provided?

The move to include reading instruction in kindergarten suffers from several flaws in the beliefs underlying the typical program. It has been assumed *incorrectly* that:

- ☐ general readiness skills, such as the ability to cut on a line, are prerequisite to *real* reading;
- ☐ young children learn the same way older children do;
- ☐ reading occurs only when a child can decode unfamiliar words or recognize whole words in unfamiliar contexts;
- ☐ commercially-published programs and materials for kindergartners are based upon sound research about how young children learn to read; and
- ☐ facility with reading must precede writing.

Practices based on such mistaken notions about reading and young children are of concern to many early childhood and reading educators. In a joint statement about present practices in pre-first grade reading instruction, the following education groups presented their concerns:

- Association for Supervision and Curriculum Development
- International Reading Association
- National Association for the Education of Young Children
- National Association of Elementary School Principals
- National Council of Teachers of English

The concerns of these professionals are:

- ☐ Many pre-first grade children are subjected to rigid, formal pre-reading programs with inappropriate expectations and experiences for their levels of development.
- ☐ Little attention is given to individual development or individual learning styles.
- ☐ The pressures of accelerated programs do not allow children to be risk-takers as they experiment with language and internalize concepts about how language operates.
- ☐ Too much attention is focused upon isolated skill development or abstract parts of the reading process, rather than upon the integration of oral language, writing and listening with reading.
- ☐ Too little attention is placed upon reading for pleasure; therefore, children often do not associate reading with enjoyment.
- ☐ Decisions related to reading programs often are based on political and economic considerations rather than on knowledge of how young children learn.
- ☐ The pressure to achieve high scores on standardized tests that frequently are not appropriate for the kindergarten child has resulted in changes in the content of the programs. Program content often does not attend to the child's social, emotional and intellectual development. Consequently, inappropriate activities that deny curiosity, critical thinking and creative expression occur all too frequently. Such activities foster negative attitudes toward communication skill activities.
- ☐ As a result of declining enrollments and reduction in staff, individuals who have little or no knowledge of early childhood education sometimes are assigned to teach young children. Such teachers often select inappropriate methodologies.
- ☐ Teachers of pre-first graders who are conducting individualized programs without depending upon commercial readers and workbooks need to articulate for parents and other members of the public what they are doing and why.

William Teale suggests that recent research has "prompted a reformulation of certain traditional beliefs about concepts such as reading readiness and about the types of preschool experiences which foster independent reading and writing abilities in the child." (33)* Recent research in reading is consistent with research in language acquisition and with the interactionist view of learning. Current perspectives on how children become literate stress the holistic nature of language in both written and spoken forms. Not only do spoken language abilities impact upon success with reading and writing, but the processes of acquiring literacy appear to be similar to the processes of acquiring verbal language. The research and theories of psycholinguists such as Carol Chomsky, Frank Smith, Kenneth and Yetta Goodman, Carol Read and Donald Graves indicate that children learn langauge, both in verbal and written forms, by constructing rules and relationships from within, rather than absorbing them from without. Children's interactions with readers and writers in a literate environment, therefore, provide the opportunities for children to formulate, try out and revise their ideas about written language, much as verbal interactions allow the young child to construct the rules of spoken language.

*References for this section on reading and writing are given by numbers keyed to a reference list that begins on page 55.

One method which is especially conducive to literacy learning is the language experience approach to reading. With this, children's individual and group dictations and the texts of familiar books, poems, rhymes and songs are used for specific skills as well as the broader purposes of printed language. Through the language experience approach, the functions of written language, the relationship between oral and written language and the relationship between written language and meaning, along with letter and word recognition and letter-sound correspondence, can be learned. The Commission on Reading recommends that "from the very beginning children should be given all of the elements necessary for constructing meaning. This is important because reading at this early level is a new enterprise, and children must be made aware that reading is always directed toward meaning ." (8) The language experience approach can provide children with these elements: familiar language patterns, familiar words, personally relevant content, association with real life experiences and letter-sound relationships. In contrast, the workbook-based programs often used in kindergarten reading programs usually focus on only one or two of these elements, particularly letter-sound relationships.

In summary, the teaching of reading and writing in kindergarten is best approached as a process of fostering children's emerging literacy. Experiences in a literate classroom environment, i.e., involving children in the exploration and discovery of written language, can make literacy learning a meaningful and exciting process with long-term benefits.

Goals In Teaching Emerging Literacy

1. Recognize and utilize previous written language experiences.
2. Approach literacy as a developmental process.
3. Accept literacy attempts as appropriate for that child and time.
4. Foster each child's written language formulation and modification.
5. Help children understand the functions of reading and writing.
6. Involve children in meaningful reading and writing experiences.
7. Build oral language as a foundation for literacy reading.
8. Provide an individualized literacy program.
9. Provide access to literacy through reading and writing experiences.
10. Use children's literature to develop enjoyment in reading and writing.
11. Strengthen the kindergarten teacher's expertise in language arts.

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Description of a Developmentally *Appropriate* Kindergarten Reading Program

1. Young children learn through experiences that provide for all of the developmental needs—physical, socio-emotional, as well as intellectual.

2. Young children learn through self-selected activities while participating in a variety of centers which are interesting and meaningful to them. (Learning centers include: socio-dramatic, block, science, math, manipulatives, listening, reading, writing, art, music and construction.)

3. Young children are encouraged to talk about their experiences with other children and adults in the classroom.

4. Young children are involved in a variety of psychomotor experiences including music, rhythms, movement, large and small motor manipulatives and outdoor activity.

5. Young children are provided with many opportunities to interact in meaningful print contexts: listening to stories, participating in shared book experiences, making language experience stories and books, developing key word vocabularies, reading classroom labels and using print in the various learning centers.

From "Developmentally Appropriate Kindergarten Reading Programs: A Position Statement," by Janet Black, Margaret Puckett, Anne Haws, Kay Moberg and Libby Vernon. Texas Association for the Education of Young Children, 1986. Used with permission.

Description of a Developmentally *Inappropriate* Kindergarten Reading Program

1. Formal kindergarten reading programs usually focus upon whole group instruction in visual-motor and phonics lessons with commercially prepared workbooks and ditto sheets.

2. Formal kindergarten reading programs usually include reading instruction in a basal reading series. This process frequently involves the learning of rules with emphasis upon the form rather than the meaning of written language.

3. A formal kindergarten reading program often requires children to sit for inappropriately long blocks of time in teacher-directed activities with overemphasis upon table work and fine motor skills.

4. A formal kindergarten reading program focuses upon isolated skill-oriented experiences which include repetition and memorization.

From "Developmentally Appropriate Kindergarten Reading Programs: A Position Statement," by Janet Black, Margaret Puckett, Anne Haws, Kay Moberg and Libby Vernon. Texas Association for the Education of Young Children, 1986. Used with permission.

Research, implications and recommended practices. Major principles in teaching the process of emerging literacy, including the implications of these principles and samples of recommended practices, follow. The principles and some additional information that appears here are adapted from "Developmentally Appropriate Kindergarten Reading Programs: A Position Statement" by Janet Black, Margaret Puckett, Anne Haws, Kay Moberg and Libby Vernon (Texas Association for the Education of Young Children, 1986). Used with permission.

> ***Early development of the knowledge required for reading comes from experience talking and learning about the world and talking and learning about written language.***
>
> Commission on Reading (8)*

Principle 1

Children begin to learn to read and write long before kindergarten. (2, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17, 19, 20, 21, 29, 31, 32)*

Goal

To recognize and utilize children's previous experiences with written language.

Examples

- ☐ Children as young as 2 recognize the trade names Coke, McDonald's, and K-Mart.
- ☐ Two- and three-year-olds write. One child puts two dots on his paper and proudly announces, "That says my name."

Implication

Teachers and parents need to be aware of the young child's early interest in reading and writing. Adults should acknowledge and encourage this emerging literacy.

Recommendations

- ☐ Encourage children to pursue their writing interests through dramatic play, a writing center or taking dictation.
- ☐ Provide opportunities for children to read familiar signs and logos in dramatic play settings.
- ☐ Encourage children to read favorite books (which they have memorized) to each other or into a tape recorder.
- ☐ Recognize that readiness for a particular reading activity is a function of experiences with literacy, not of age or general developmental characteristics such as having the ability to skip or cut on a line.

*References for this section on reading and writing are given by numbers keyed to a reference list that begins on page 55.

> ***Parents play roles of inestimable importance in laying the foundation for learning to read. A parent is a child's first tutor in unraveling the fascinating puzzle of written language.***
>
> Commission on Reading

Principle 2

Young children's reading and writing behaviors are different from those of older children and adults. Young children work out logical but nonconventional solutions in their reading and writing. (2, 4, 5, 6, 7, 10, 11, 13, 15, 16, 17, 19, 20, 21, 26, 30, 31, 32, 33)

Goal

To approach literacy as a developmental process which takes various forms at various stages.

Examples

- ☐ Young children invent spelling. "I lv u." (I love you.)
- ☐ Five-year-old Jay reads, "Jay," "Jessica" and "Justin" all as "Jay" because they all begin with J.

Implication

Teachers and parents should not impose adult standards of reading and writing upon young children. Children's efforts should be recognized and accepted as part of a developmental sequence. Young children need the same support and encouragement in literacy development as they received when they learned to walk and talk.

Recommendations

- ☐ Encourage children to attempt their own spelling of messages and accept their products.
- ☐ Encourage children to read books by themselves and accept their memorized or constructed versions.
- ☐ Provide feedback to children about their nonconventional productions in a positive way when they seem open to suggestion: "I can read your word. You spelled it like it sounds. This is how your word would be spelled in a book."

> ***A parent is the child's one enduring source of faith that somehow, sooner or later, he or she will become a good reader.***
>
> Commission on Reading

Principle 3

Young children develop conventional reading and writing behaviors over a period of years. (2, 4, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17, 19, 20, 21, 26, 30, 31, 32, 33)

Goal

To accept children's literacy attempts as being appropriate for that child at that time.

Examples

- ☐ Gradually, children discover that "Jay," "Jessica" and "Justin" do not all say the same thing.
- ☐ Over a period of time children will change "I lv u." to "I love you."

(Principle 3 continued on next page)

Principle 3 (continued)

Implication

Adults must allow children time to develop competencies in reading and writing. Young children's approximations are developmentally appropriate behaviors. In learning to read and write, it takes time and experiences for conventional forms to evolve.

Recommendations

- ☐ Kindergartners should be provided with individualized literacy experiences that begin with their present competency and allow them to extend understandings and skills at their own paces.
- ☐ Continuity in literacy experiences between the preschool, kindergarten and first grade settings should be maintained.
- ☐ Save samples of children's writing and reading (on tape) to follow their progress.

> ***Even young children often see the futility of doing workbook page after workbook page. As one boy, age 6, said, "There! I didn't understand that, but I got it done."***
>
> Commission on Reading

Principle 4

Young children are active constructors and not passive receivers of reading and writing knowledge. (2, 4, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33)

Goal

To foster each child's formulation and modification of ideas about written language.

Examples

- ☐ Five-year-old Joanie recognizes the word "tarantula" because she saw one at the zoo, talked about it, drew it and wrote a story about it.
- ☐ Kenny announces that Monday and March both "look the same here," pointing to the two Ms in the calendar words.

Implication

Adults should provide children with opportunities to actively use their developing knowledge about reading and writing. Isolated skill activites emphasize passive learning. Young children do not learn best with quiet, paper and pencil, teacher-directed activities.

Recommendations

- ☐ Link real-life experiences with opportunities to read and write about them, such as making books about a field trip.
- ☐ In place of workbooks and skill sheets, provide experiences with whole written language and develop skills through a language experience approach.

> ***The best way to get children to refine and extend their knowledge of letter-sound correspondences is through repeated opportunities to read.***
>
> Commission on Reading

Principle 5

Young children learn about reading and writing by participating in and observing literacy experiences that people use for real-life purposes. (2, 4, 5, 7, 9, 10, 11, 13, 14, 16, 17, 19, 20, 21, 26, 29, 30, 31, 32)

Goal

To help children understand the functions of reading and writing in daily life.

Examples

- ☐ Daniel encloses pictures and messages for his grandmother with his mother's letters.
- ☐ Roberto reads the class name list to the other kindergarten children so his teacher can record the day's attendance.

Implication

Young children need to have literacy experiences which are based on real-life activities. Social interaction is important because it surrounds the reading and writing experience that makes literacy "take" in the child.

Recommendations

- ☐ Include children in daily routines involving written language, such as taking attendance, signing up for activity centers, finding the date on the calendar and assigning daily helpers.
- ☐ Help children to write messages needed for practical purposes, such as a sign attached to a block building that reads, "Please leave my building up."
- ☐ Record thank-you notes for field trips, classroom volunteers or holiday parties that the children dictate.
- ☐ Include props in dramatic play that incorporate written language in a practical way, such as a class telephone directory in the "house," menus in the "restaurant" or sale signs in the "grocery store."

> ***From the very beginning, children should be given all of the elements necessary for constructing meaning. This is important because reading at this early level is a new enterprise and children must be made aware that reading is always directed toward meaning.***
>
> Commission on Reading

Principle 6

Children learn about the form of written language through using it in meaningful contexts. (2, 4, 5, 7, 9, 10, 11, 13, 14, 16, 17, 18, 19, 20, 21, 29, 30, 31, 32)

Goal

To involve children in meaningful experiences with reading and writing.

(**Principle 6** continued on next page)

Principle 6 (continued)

Examples

- ☐ Jessica informs 5-year-old Jay that "Jessica" says her name, not his.
- ☐ Joanie can find the word "tarantula" in her 23-word story.

Implication

If children are provided with opportunities to read and write with an emphasis on finding meaning, knowledge about the form of written language will emerge naturally. Demanding that young children control all aspects of written language, such as correct grammar, punctuation and spelling, overwhelms children when they attempt to write. Similarly, demanding that beginning readers correct all errors, including high-quality errors which preserve the meaning of the text, makes reading tedious and disfluent.

Recommendations

- ☐ Help children to understand a problem when their reading and writing strategies don't work.
- ☐ Encourage children to talk together about written language they produce or find around them.
- ☐ Help children to evaluate their notions about written language in light of conventional writing and reading they observe.

> ***The way in which parents talk to their children about an experience influences what knowledge the children will gain from the experience and their later ability to draw on the knowledge when reading.***
>
> Commission on Reading

Principle 7

Children need to have many varied oral language experiences in the classroom if they are to develop into competent readers and writers. (11, 12, 14, 15, 17, 19, 20, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33)

Goal

To build children's oral language as a foundation for literacy learning.

Examples

- ☐ Kate has no problem comprehending the basal reader stories in first grade. Her dramatic play experiences in kindergarten helped her to internalize that plots have a beginning, a middle and an end.
- ☐ Jacob writes a story that is understood by his first grade audience. His kindergarten experience in learning to give all the background information during sharing time carries over into his writing behavior.

Implication

Children need opportunities to further develop their verbal language abilities in kindergarten. Communication in a school setting requires skills different from those needed for communication at home. Children need to learn to adapt their expressive and receptive language to a different social context.

Recommendations

- ☐ Provide experiences for children to dramatize familiar stories and role play in dramatic play and block areas.
- ☐ Encourage children to talk about out-of-school experiences.
- ☐ After activity time, ask children to share their projects and creations and describe sequentially what they did.

> ***What the child who is least ready for systematic reading instruction needs most is ample experience with oral and printed language, and early opportunities to begin to write.***
>
> Commission on Reading

Principle 8

All children come to school with knowledge about reading and writing. However, this knowledge usually varies from child to child. Differences among children are related to previous literary experiences rather than age, socioeconomic status, sex, race or general developmental level. (13, 14, 18, 19, 31, 33)

Goal

To provide an individualized literacy program that recognizes each child's unique literacy development.

Examples

- ☐ Holly is the only child of university professors. There is a wide variety of reading and writing materials and experiences in her home.
- ☐ James comes from a large family with limited reading abilities and experiences. Books are a new experience for him. He can, however, read the names of many familiar products and logos.

Implication

Teachers must observe to discover children's particular literacy skills and understandings. Then, teachers need to provide opportunities for children to develop broader competence in reading and writing.

Recommendations

- ☐ Use ongoing observations of children's literacy, not simply standardized readiness tests, to assess a child's current level of competence.
- ☐ Ensure that all children receive the most fundamental of literacy experiences by reading to them often and allowing them to experiment with writing materials.
- ☐ Help parents to understand the critical experiences necessary for reading success.

> ***Reading must be seen as part of a child's general language development and not as a discrete skill isolated from listening, speaking and writing.***
>
> Commission on Reading

Principle 9

Encouraging children to write in order to communicate helps them organize their thoughts and often precedes the reading process. Writing also facilitates the acquisition of specific skills such as letter-sound relationships. (2, 5, 8, 10, 11, 13, 15, 16, 17, 20, 21, 30, 32)

Goal

To give children access to literacy through use of both reading and writing experiences.

(**Principle 9** continued on next page)

Principle 9 (continued)

Examples

- ☐ Five-year-old Maria has learned through her writing that there are spaces between words.
- ☐ Five-year-old Amanda writes from left to right and from the top of the page to the bottom in her journal.

Implication

Adults need to encourage young children to do their own drawing and writing.

Recommendations

- ☐ Provide word lists relating to holidays or children's interests.
- ☐ Incorporate writing into dramatic play: *doctors* write prescriptions, *waiters* write meal orders, children write messages to mail at the *post office*.
- ☐ Provide children with individual journals to record their writing.
- ☐ Stimulate children's writing interests with new materials: markers, colored pencils, a picture dictionary, a typewriter, a word processor, letter stamps, envelopes and different shapes and sizes of paper.
- ☐ Encourage children to label their drawings, paintings and block constructions.

> ***The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children.***
>
> Commission on Reading

Principle 10

Literature plays an important part in helping children to develop into competent readers and writers. (9, 19, 27, 30, 31, 32, 33)

Goal

To develop children's enjoyment of reading and writing through the appreciation of children's literature.

Examples

- ☐ Ben requests the assistant in the classroom to read the *Cat in the Hat* over and over. Later, Ben begins to read the story himself by remembering the repetitive phrases and reconstructing the story by using the picture clues.
- ☐ Rebecca uses the pattern in "Brown Bear, Brown Bear, What Do You See?" to make her book, "Yellow Dog, Yellow Dog, What Do You Hear?"

Implication

Teachers and parents should read to children every day. Children must hear and see written language so they can learn to read and write.

Recommendations

- ☐ Use parent volunteers or classroom assistants to read to children individually or in small groups.
- ☐ Encourage children to listen to favorite books over and over.
- ☐ Provide children with books and companion recordings.

Principle 10 (continued)

- ☐ Use Big Books and large print charts of songs and poems to provide larger groups of children with simultaneous visual and verbal experiences.
- ☐ Gather a collection of familiar and "predictable" books which children can begin to read after a few listenings.
- ☐ Guide parents in choosing appropriate, high-quality literature for their children through the school and public libraries, book clubs and school book fairs.

(See further information about children's literature in the integrated curriculum section, Chapter 5 of Part I.)

> ***Teaching is a complex and demanding profession, more complex than medicine according to one scholar who has studied both professions. Thus, career-long opportunities for growth, renewal, and access to new information are essential.***
>
> Commission on Reading

Principle 11

The typical undergraduate program in elementary education includes one course in the teaching of reading and a related course in the teaching of language arts. (1, 8)

Goal

To strengthen the kindergarten teacher's expertise in the area of language arts.

Examples

- ☐ Ms. Smith depends heavily on a commercial reading program for her kindergarten because she has no background in teaching reading to young children.
- ☐ Mr. Jones refuses to teach reading in his kindergarten because he believes reading necessitates pushing children to do first grade work.

Implication

Teachers need more comprehensive training in the language arts, including theories, research and methodology.

Recommendations

- ☐ Preservice teachers should receive more extensive preparation in reading and stronger training in the practical aspects of teaching.
- ☐ Research and practice should be brought together in reading education courses.
- ☐ Special provisions should be made for supporting new teachers.
- ☐ School systems should ensure that teachers are kept up-to-date on language arts research and practice through professional development workshops and seminars, making professional journals available and providing financial support for participation in conferences, workshops and college courses.

Summary: becoming literate

Children learn about reading and writing by being immersed in a literate environment, rich in encounters with written words. The process is similar to the way toddlers learn to speak by being surrounded by oral language.

Ten Ways to Create a Literate Classroom Environment

1. Read to children every day, individually and in small groups.
2. Show children how familiar songs and rhymes look in print.
3. Use print functionally in the classroom: label learning centers and storage containers, and refer to a class list of names.
4. Incorporate print into children's dramatic play.
5. Provide a comfortable, attractive book corner with books, story tapes, predictable books, pillows and stuffed animals.
6. Make writing materials available to children: markers, pencils, assorted paper, letter stamps and a typewriter.
7. Incorporate writing into children's dramatic play and block play.
8. Invite children to dictate or try to write their own stories about their drawings and paintings.
9. Write experience charts, daily newspapers and messages with the group.
10. Be a reader and a writer in the eyes of the children.

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Growing Through Mathematics

4

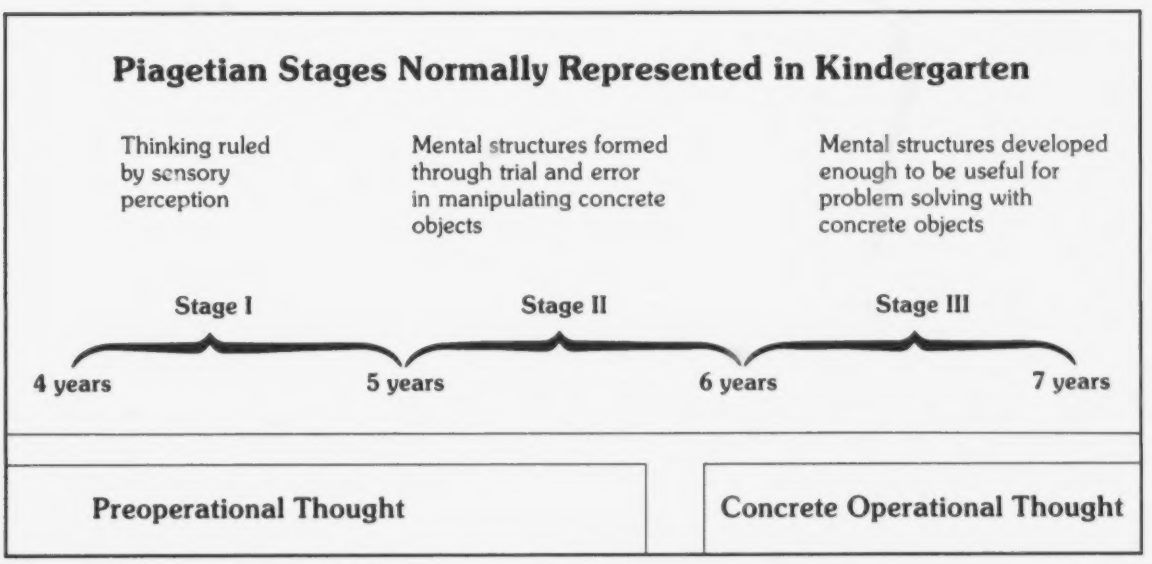
Growing Through Mathematics 4

The development of mathematical knowledge involves the discovery of relationships, many being constructed from physical observations. Mathematics provides us with a language and way of organizing information—we communicate about observations and organize data to solve problems.

As children investigate the world around them, they construct and reinvent mathematical knowledge. They use physical models to explore new relationships and to place relationships into the framework of knowledge already constructed. In order to help young children to develop logico-mathematical thinking, we must provide an environment of appropriate physical materials, ask questions and design activities that encourage them to explore and to think.

Cognitive theorists and researchers who have focused on early childhood development in mathematics including Piaget, Bruner, Copeland, Skemp, Stern, Ginsburg and Kamii have demonstrated that young children observe relationships and develop logico-mathematical knowledge while passing through a series of stages. Children progress through the stages moving from sensorimotor to preoperational, to concrete operational and finally, for most individuals, to the formal operational level. Children understand information at concrete, then pictorial and later at symbolic levels.

The mathematics curriculum should build on the nature of childen's perceptions. There is an hierarchical order to the construction of mathematical concepts and related skills. This developmental sequence should be taken into account so that realistic program goals are developed and an appropriate sequence of instructional activities is provided. Instead of encouraging the memorization of facts, a developmental program emphasizes individual exploration of materials and allows children to discover patterns that help them to develop an understanding of mathematical concepts.


Piagetian Stages Normally Represented in Kindergarten
Thinking ruled by sensory perception
Mental structures formed through trial and error in manipulating concrete objects
Mental structures developed enough to be useful for problem solving with concrete objects
Stage I
Stage II
Stage III
4 years
5 years
6 years
7 years
Preoperational Thought
Concrete Operational Thought

Piaget's Stages of Cognitive Development			
Sensorimotor **0-2 years**	**Preoperational** **K - 1 +** **2-7 years**	**Concrete Operational** **1 - 4 +** **7-11 years**	**Formal Operational** **12 years and on**
Instinctive, relatively rigid responses to physical surroundings	Responses based on appearances as perceived through physical observations **Prenumber** Not aware of contradictions Easily distracted Counts Many have one-to-one correspondence Does not conserve number Compares more/less Uses one attribute	Responses are to physical appearances and interpreted through trial and error to form simple logical processes **Prenumber/Number** Conserves number Less easily distracted Understands part/whole Class inclusion Orders objects and classifies by one, later two, attributes Specifies amount more/less	Generalizes rules and definitions in response to non-physical observations

The mathematics curriculum

The reassessment of mathematics curriculum objectives and the sequencing of learning activities in elementary classrooms, particularly kindergarten classrooms, in accord with developmental mathematics theory points to the need to reorganize expectations and teaching strategies. Kindergarten students must explore a variety of manipulative materials which provide opportunities for them to construct logico-mathematical knowledge.

The primary goal of the mathematics curriculum is to develop mathematical thinking for problem solving. The formal elementary school curriculum may be described in terms of three major areas of mathematics: spatial relationships, data organization and numerical relationships. Problem-solving skills must be developed across all three.

The Mathematics Curriculum Framework

Spatial Relationships	**Data Organization**	**Numerical Relationships**
Geometry	Classification	Number and counting strategies
Measurement	Patterns	Comparison
Estimation	Estimation	Estimation
	Graphing	Computation

The kindergarten classroom should provide an environment in which children can freely explore a variety of materials. Activities should be open-ended so that children may draw on their previous experiences and build mathematical ideas. Children need to observe physical reality spatially: to locate, measure and estimate. They need to organize information: to sort, order, classify, pattern, graph and estimate. They need to quantify their observations: to count, compare, estimate and compute. The focus of the mathematics curriculum should not be limited to arithmetic. Early childhood mathematics programs must include opportunities for children to work in all three areas and to develop a full range of problem-solving skills using sensorimotor, perceptual and cognitive skills.

Children's early ideas about number and counting strategies

Much of the information children encounter comes to them as a language experience.

The world is filled with numbers and with young children actively engaged in sorting out information about numbers. Much of the information they encounter comes to them as a language experience. Most children learn to count by rote memorization without the aid of formal academic instruction.

Rote counting involves learning each special number word in a particular order. Since the "list" seems never to end, children learn a few words at a time. Although adults give them the social knowledge of the words and the sequence, many children observe a verbal pattern: "seventeen, eighteen, nineteen is 'like' seven, eight, nine!" Children seek to limit the number of words they must memorize and adopt this verbal pattern as a way to deal efficiently with the long list of number names. Thus, children will often count: "Seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, tenteen!"

Children apply a pattern they have perceived to decrease the amount of memorization. When told the word "twenty" is the correct name for "tenteen," children often count again, using the pattern through twenty-nine. Then they pause at each decade and wait to be supplied with the special new words "thirty," "forty," etc. Children enjoy the counting process and spontaneously count during play.

Counting and cardinality. Children search for meaning but often think differently than adults about underlying concepts. Parents may assume that their kindergartner is advanced and good in mathematics because the child counts to 100 or says "5 + 3 = 8." Yet, closer investigation may reveal some surprising ideas about number concepts that the child has constructed.

Consider, for example, the following:

A child is given four candies and asked to count them.

Child: "One, two, three, four."
Adult: "How many candies do you have?"
Child: "Four!"
Adult: "Good. Eat one. Now how many candies do you have?"
Child: "Four."
Adult: "How do you know that?"
Child: "I ate one. Two, three and four are still there."

The child seems to understand that in order to find out how many candies there are, each object must be counted once and only once, and says the number words in the proper order. For this child, however, removing an object from the set does not change the number name used to tell how many. The child has decided that each candy has a number name and that the word which matches the last-named candy also tells how many candies are in the pile. Thus when a candy (name) is removed, the last-named candy—in this case four—is still the word that tells how many, since the candy with name four remains. A child at this stage in number concept development might also find it very surprising, if he places some objects in a row and counts from right to left and then recounts from left to right, that there are the same number of objects in the set no matter what the direction of counting.

One-to-one correspondence. Children must establish the skill of matching one object to one number word to correctly count the number of objects in a set. They must also construct the idea that two sets have the same number of objects if the objects in one set can be matched one-to-one with the objects in the other set. An activity that permits us to observe a child's level of thinking is Piaget's diagnostic task for one-to-one correspondence.

Place a row of five counting objects, spaced evenly apart, in front of the child.

Then hand the child another set of objects, one that contains two or three more counters than the first. Ask the child to make another row that has the same number of objects as the first row.

Some children will do this.

Other children, however, will do this.

When questioned about their results, children who did not use a one-to-one matching strategy will explain that each row has the same number of objects (despite any variance in length) because:

"Both rows are straight."

"I used up all the counters you gave me."

"They are the same things."

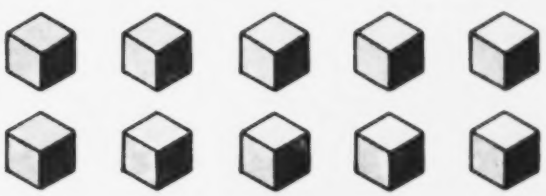
Children at this stage of understanding number concepts need to, and will, develop more efficient counting strategies. Everyday activities at home and at school, such as counting and matching teacups to saucers, straws to milk cartons, napkins to spoons or pencils to students, provide experiences that help children develop the concept of one-to-one correspondence.

Everyday activities at home and school help children develop the concept of one-to-one correspondence.

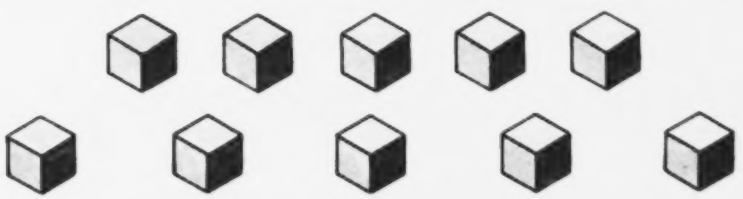
Conservation of number. Children also must discover that the way objects are arranged or rearranged does not determine how many are in the set. A diagnostic task to assess understanding of the conservation of number involves teachers observing and questioning children as they work with two sets of objects.

Build a row of five counters in front of the child.

Ask the child to count them and tell you how many counters are in the row. If the child correctly states that there are five objects, ask the child to build another row that has the same number.



Ask the child how many objects are in each row. When it has been established that there are five counters in each row, spread out one row.



Now ask if there is the same number of counters in each row.

Some children will state that there is the same number and when questioned, will explain:

"Each row has the same number. You spread them out, but they could be put back," or

"They're the same because you didn't put any more in (or you didn't take any away)."

Other children, however, will claim there is not the same number in each row. These children may explain their response in various ways:

"One row is shorter."

"My row is taller."

"I have more."

Activities that require counting, matching and rearranging sets of objects are necessary for children to construct number concepts. These experiences begin with the manipulation of real objects and later are repeated at the pictorial level. Cognitive research has established that while all children proceed through the same stages, individual differences due to experience and other factors enable some children to reach later stages sooner than others.

Children must relearn for larger numbers what they have already discovered about smaller sets.

Typically, children must relearn for larger numbers what they have already discovered about smaller sets. Diagnostic tasks such as those above should be repeated as children begin to work with larger numbers. Children as young as 4 may understand one-to-one correspondence, while others as old as 9 may not understand conservation of number.

As children develop efficient ways for counting and verifying the number of objects in sets, they will assign themselves new tasks. It does no good to tell the child how to do a task — children will do or say what we request, but without the understanding we think they have obtained. Rather, children should be given open-ended tasks which allow them to think through their own strategies while we observe, diagnose and then plan new activities.

Open-ended tasks allow children to think through their own strategies.

Using number concepts to solve problems. Through activities at the concrete and later pictorial levels children develop visual imagery that aids in solving mathematical problems. Students at early stages of logico-mathematical understanding are easily distracted and often forget previous observations.

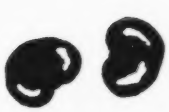
Monica was shown two plates, one with three plastic frogs on it and another with five frogs. The plates were then hidden and two frogs were removed from the plate of five. The plates were again shown to Monica.

Monica: "Hey, wait ... There's one, two, three. It has three like this plate."
Adult: "What happened?"
Monica: "Some of those frogs are gone."
Adult: "Oh?"
Monica: "Yeah, there are three now, but not before."
Adult: "How many were there?"
Monica: "There was another here, and here (pointing)."
Adult: "How many were there then?"
Monica: "They must have fallen off (looking around at the floor)."
Adult: "What would you need to fix this?"
Monica: "Well, do you have the frogs?"
Adult: (Gives Monica four plastic frogs.)
Monica: (Puts all four onto the plate.) "There, I've fixed this."

Monica has forgotten how many objects the plate needs to hold and is happy to take and use all the offered frog counters.

Pictorial records assist children in reviewing their previous observations. As fine motor skills develop, children should draw pictures to record their observations. For example, if a child has rearranged five beans into two groups, he or she might draw a picture like this:

Once the student can consistently record and interpret pictures, can match the number symbol to a set of objects and has the fine motor skills necessary to write numbers, he or she can complete the drawing by using numerals to label each set.



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Using pictures is a giant leap. Eventually children develop interest in the written symbols adults use and enjoy experiences matching numerals to sets of objects and to pictures of objects. The shape of the numerals is another arbitrary piece of social knowledge that must be remembered. Fine motor skills must be fairly strong before students can, without frustration, practice numeral formation.

Young children gain information about mathematics first at the concrete level of operation. Concrete mathematics is informal and natural. Generally, arithmetic is done by counting objects, and many children must touch the objects as they count. Later, children use finger counting for much the same reason.

Counting on. An efficient counting strategy, useful when combining two sets or adding a quantity to a known set, is to start with the known number of objects in the first (or larger) set and then count on through the second set of objects to arrive at the total. A diagnostic task to assess student ability to use this strategy consists of watching as students combine two sets of counting objects.

Give the child a set of about 10 counting objects, such as pennies. Ask the child to make a set of five pennies. Then ask the child to add to the set so that it has eight pennies.

The child who builds the set of eight by starting over and counting from one to five and then six, seven, eight does not have the skill of counting on.

Implications of diagnostic assessments for number concepts. Until a child consistently demonstrates understanding of one-to-one correspondence, conservation of number and counting on strategies, he or she does not have a firm enough concept of number to understand fact sentences. Such a child cannot, even with concrete models, understand the process of addition. Therefore, any activities that require a student to work at a symbolic level with addition facts are inappropriate. Rather than continue number work, time should be spent developing skills and concepts in the other areas of the mathematics curriculum.

Children's early work – organizing information

Perhaps the most important activities for developing mathematical thinking in young children involve sorting and classifying. The ability to see similarities and differences precedes development of the ability to form and use concepts. Much time in the kindergarten year should be devoted to the free exploration and natural classification of collections of objects. Collections might consist of everyday objects such as buttons, leaves, nuts, dried pasta, bottle caps or plastic bakery and vegetable tabs. Children should be allowed to explore the material and then encouraged to sort the objects.

The ability to see similarities and differences precedes the ability to form and use concepts.

Sorting. Early attempts to sort objects — buttons for example — often result in making many piles of buttons, sorted so that every detail matches so perfectly you could sew them onto a shirt front. Eventually, children begin to focus on particular attributes. Color is often the first attribute that draws their attention. The buttons are then sorted into piles by color alone.

Later, size or some other attribute may be discovered. The advanced sorter might make piles of large red buttons, small red buttons, large blue buttons, small blue buttons, etc., indicating that he or she can identify and use two attributes to establish a new classification rule.

Establishing rules for classification. Children allowed to sort with a minimum of direction will be free to investigate any physical attributes they perceive. If children are encouraged to discuss and compare the results of sorting tasks, they begin to verbalize rules for the sorting activity. Many kindergarten children, with a minimum of direction, can produce sets sorted by color, size or shape. Few children of this age abstract rules for sorting by more than one attribute.

Patterning. Once a child can identify sameness and differences, the child can use the information to copy and extend simple patterns. Early opportunities to work with patterns include activities such as reproducing a red-green, red-green pattern with colored cubes. The child copies and then extends the pattern. Later, the child may see that a blue-orange, blue-orange pattern is similar and both patterns can be classified as "ABAB."

Children at this stage often are able to identify more patterns in the environment. A candy cane, for example, is recognized as a red-white, red-white (or ABAB) pattern. Some kindergarten children are able to invent more elaborate patterns that involve shape, size, color, position or texture arranged in two or more dimensions, but this ability is more typical of first and second graders.

Graphing. Young children also are able to make and interpret real graphs. The graphs use the actual objects under discussion, since most kindergartners are not able to represent an object with a picture or symbol.

A real graph might be constructed by asking students if they have mittens or gloves. Each child places his or her mitten or glove in a square on an old tablecloth ruled into two rows of 6-inch grids. Students then examine and discuss the graph. Are there more mittens or more gloves? How many people have placed a mitten on the graph?

A graphing activity can involve concepts from other disciplines.

A graphing activity should be a daily event and can involve concepts from other disciplines. For example, a weather graph that keeps track of sunny, cloudy and wet days is also a science lesson.

Few kindergarten children can answer questions about the graph, such as how many more or how many less. One-to-one correspondence, order and inclusion concepts must be developed first.

Sequencing events. The young child's perception of time develops in terms of the sequence of events. Tasks to develop an understanding of sequence could involve placing three or four events in order. Telling stories and arranging pictures to match the sequence of events are useful activities.

Discussions about the length of time needed to do a task also are useful. Which will take longer: walking around the school yard or walking around the block?

Order. Physical properties, such as size or length, are the basis for placing several objects in order from largest to smallest or shortest to tallest. Children may arrange three or four straws cut to different lengths. Nesting objects, such as measuring cups, measuring spoons and nesting cubes are typical materials the young child can place in order. Other materials that can be hooked together in different lengths for seriation include Unifix cubes, multilinks, Legos and links.

Spatial relationships. Children avidly explore spatial relationships. The block corner is a popular place. Materials such as blocks, cubes, shapes, tangram pieces and geoboards fascinate people of a wide age range. As the kindergarten child investigates size, shape and position during exploratory activities, concepts — including top/bottom, left/right, inside/outside and larger/smaller — can be introduced. The manipulation of objects also provides the opportunity to learn the names of shapes such

as triangle, circle and square. Children can use materials such as pattern blocks to build designs and also reproduce each other's simple designs made from three or four pieces.

Free exploration also should include investigation of the balance scale. Children begin by filling the pans at random; they will notice intuitively that the pans might be balanced. Then they will begin to carefully add items to the pans. Few kindergarten children remove objects to balance the pans. Young children do not immediately see the reversibility of their actions. This is additional evidence that kindergarten children cannot perform the formal operations of addition and subtraction with understanding — though they may rotely memorize addition and subtraction sentences. For this reason, addition and subtraction exercises are best left for later grades.

Estimation. Estimating involves spatial, quantitative and organizational skills and is perhaps the most unifying concept in mathematics.

Activities that require students to guess how many objects might fill a jar or cover a space help develop powerful insights into numerical thinking and should be engaged in frequently. The estimation activities should not, however, be constructed as contests. The goal is to help students develop reasonable estimates. Estimation activities such as, "About how many pencils long is my desk top?" involve geometry, nonstandard measurement, quantitative comparison and prediction based on previous experiences and, therefore, are very helpful.

Virtually every classroom activity can provide opportunities to use mathematical thinking.

An integrated program. Students should be encouraged to use mathematical thinking in their everyday world. Virtually every common classroom activity can provide such opportunities.

Organizing information, using spatial relationships and working with numbers must be interwoven to provide ways for students to generalize mathematical thinking. Mathematics lessons should consist of the exploration and use of several topics. Lessons that integrate mathematics topics by employing at least one topic from each of the three major areas of mathematics maximize the use of classroom time.

A good lesson might consist of asking students to sort a small jarful of pattern block pieces by shape. The sorted piles could be discussed and a real graph made. The number of pieces in each row of the graph is counted, the rows are compared to find the shape that appears most and the shape that appears least. The lesson begins with geometry (seeing differences in shape), proceeds to organization of data (sorting the pieces by one attribute and then graphing the results) and includes number work (the use of one-to-one correspondence, counting and comparing for more/less).

Just as mathematical concepts are related, mathematics should be integrated with other content areas. Science lessons that require students to classify, count, estimate, measure and build a real graph incorporate mathematical thinking skills.

- ☐ A science lesson might involve students in collecting nuts in the park near the school, sorting them by kind, learning their names, counting each set, guessing which student's collection jar has the most nuts and making real graphs by gluing down each child's sorted collection onto grid sheets.
- ☐ A social studies lesson might consist of a trip around the block in which students discuss the route taken, guess how many houses are on each street and then draw a map of the trip route.
- ☐ An art lesson might include making designs by stamping thumbprints in patterns or arrays. Discussion could include the number of thumbprints it takes to make a row across the bottom of the paper.
- ☐ A language arts lesson might require students to tell a story about the designs they built with pattern blocks. The story could be recorded and students asked to listen and identify frequently-heard words, such as "red" or "triangle."

Integrating Mathematics With Other Curriculum Areas

Language Arts

- Compose stories, "The "Bigs and the Littles"
- Make an "opposites" book
- Play "Guess What I See," using attribute clues

Science

- Mystery box sorting without looking
- Sort materials gathered on a nature walk
- Sort objects that sink or float
- Sort objects that are magnetic
- Bake cookies with and without raisins

SORTING

Art

- Sort artwork to "take home" or "put up" at school
- Sort art materials
- Make a collage of light/dark, little/big or curly/straight objects
- Make clay pastries and sort them

Music

- Identify fast/slow rhythms
- Sort instruments
- Sing silly, serious or sad songs

Physical Education

- Sort balls, beanbags, hoops, etc.
- Choose equipment for an obstacle course — things to go over or under

Social Studies

- Sort flags of nations according to one attribute, such as color
- Sort children into groups according to the number of brothers/sisters
- Sort pets into two categories of animals

Methods of integrating content should be used to bring mathematics alive.

Another approach to integrating content is to pick a theme such as the circle. Students then find circles, draw circles, sort circular objects, dance in a circle, count circles on a poster, make patterns with circles and form pattern trains into circles.

Each of these methods should be used to bring mathematics alive. Together they foster an environment where learning is its own reward for children.

Children come to school with diverse mathematical understandings.

Just as children come to school with varied reading abilities, social skills and cultural understandings, so do they come with diverse mathematical understandings. It is essential that mathematics activities, which also are manipulative in nature, be provided for children who come to kindergarten with advanced knowledge of mathematics concepts, skills and understandings. Problem-solving activities and mathematics-related projects, integrated with other programmatic experiences, provide rich resources of challenging growth opportunities for children who move rapidly in their intellectual understanding of mathematics.

Materials. The kindergarten classroom should be equipped with a variety of materials, many of which lend themselves to the exploration and development of more than one concept. Many of the materials found in the typical kindergarten classroom — with its block corner, reading corner, puppet theater, playhouse, piano, sand table and toys — can be used as part of a mathematics activity.

Everyday items such as bottle caps, buttons, dry pasta of various shapes, nuts and bolts, leaves, shells, bakery tabs and keys are useful materials for sorting, counting, estimating, classifying and graphing. Students should be encouraged to help collect objects. The students should also be encouraged to share materials and take them out and put them away in an appropriate manner.

Materials that can be made easily and inexpensively include dry lima beans, spray painted on one side; buttonsticks, beansticks, numeral cards and set boards. Ideas for additional materials can be found in Mary Baratta-Lorton's *Mathematics Their Way* and *Workjobs II*.

Commercial mathematics materials that facilitate the development of key concepts have an important role in the classroom. Extremely useful in the kindergarten classroom are geoboards and geobands, multilinks, Unifix cubes, color tiles, pattern blocks, tangrams and primer balances. Some teachers may also wish to provide color cubes, Cuisenaire rods or attribute blocks for free exploration, sorting and patterning.

Implications for the Kindergarten Curriculum

The primary goal of the mathematics curriculum in kindergarten is to develop logico-mathematical thinking and problem-solving abilities. The focus should not be on arithmetic. Rather, young children should be provided opportunities to develop a broad range of mathematical skills and concepts through the use of sensorimotor, perceptual and cognitive abilities.

How Children Learn Mathematics

General Principle: Mathematical concepts are reinvented by children.

Implications: We must provide an environment in which children can freely explore a variety of materials. Activities must be open-ended so that children may draw on their experiences and build concepts and skills.

Guiding Principles and Implications

Principle 1

A variety of levels of mathematical understanding will exist in any kindergarten classroom.

Examples

(Examples A, B and C are adapted from Copeland, R. W., 1984.)

A. Children move through stages in understanding number.

Stage I: Rote counting — memorization of a series of sounds. Children at this stage can't tell "how many" and they do not count objects with one-to-one correspondence.

Stage II: Rational counting — children can place number names in one-to-one correspondence with objects in a set and tell "how many." However, they still do not understand the idea of "four" or "five" as shown by their inability to conserve number.

Stage III: Counting with conservation — children use the logic of number when counting. They know that 1 comes before 2, and 2 always comes before 3. They know that 2 includes 1, and 3 includes 2, etc.

B. Children also move through stages in organizing information.

Stage I: Given a set of attribute blocks, children will sort arbitrarily — a few by color, then a few by shape. If a plan is suggested, such as "all the little round ones," they will not be able to sort.

Stage II: Children will sort systematically according to one attribute, such as color.

Stage III: Children will sort systematically according to color, shape or size and begin to use two attributes at once.

C. Children move through stages in exploring and using spatial relationships.

Stage I: The only shapes which are recognized and drawn are closed, round shapes and those based on simple topological properties such as open/closed.

Stage II: Children begin to recognize shapes based on distinctions between straight and curved lines, angles of different sizes and relations between equal and unequal sides. When children trace a geometric shape they do so in a random fashion.

Stage III: Children can coordinate their mental image of a shape with the tracing of a shape. They begin and end at a fixed point of reference. They recognize shapes and can draw shapes.

Implications

- ☐ Teachers must continually assess children's levels of development. Tasks should be open-ended enough to permit observation of various strategies.
- ☐ Careful observation and recording of children's methods of using manipulative materials help determine individualized instructional plans.
- ☐ Directions for the use of manipulative materials should be unstructured to allow children to use them at different levels of understanding.
- ☐ Instruction should be organized so that while students are involved in exploration of materials the teacher may work with individual children.

Principle 2

Children develop mathematical concepts through work with concrete objects and build a mathematical vocabulary through discussion of their activities.

Example

- ☐ Aaron sees the Lego car Troy built. "I want one like that," Aaron says to Troy. "Build one yourself," Troy replies. After many tries, Aaron discovers that the order Troy used to stack his blocks on the bottom must be the same. He tries several times to build the sides but always ends up with a different looking door. "How did you do that door?" he asks Troy. "Easy," says Troy, "just keep the edges even." After several more tries Aaron says, "Oh, I see — like this." He has discovered that he must use the same size pieces as Troy.

Implications

- ☐ Select available materials for their potential to engage students in the exploration of many concepts. Commercial materials such as pattern blocks provide opportunities to explore shape, size, color, sorting, patterning, classification, number, area, symmetry and ratio.
- ☐ Provide children with opportunities to work with other children so that they can exchange ideas and develop a mathematical vocabulary.
- ☐ Provide frequent opportunities for children to explore materials freely, both individually and in small groups.

Principle 3

Mathematical knowledge develops from actions and observations of actions on objects.

Example

- ☐ Piaget cites a mathematician friend whose first interest in mathematics came as a child when he arranged a set of pebbles in a row and found that the sum was the same no matter from which end he began to count. The order was not in the pebbles; it was he who had put the pebbles in line. Neither was the sum in the pebbles; it was he who had united them in different ways.

(Piaget, 1970)

Implications

- ☐ Students must have sufficient time to explore and use materials.
- ☐ A wide variety of materials should be available for free exploration and guided activities in number work, data organization and spatial relationship areas.
- ☐ Develop a way for children to show or tell you when they have made a discovery. Accept this sharing with sincere enthusiasm and thoughtful comment.

Principle 4

Children have true understanding of the mathematical concepts that they reinvent themselves; often they do not understand terms or actions acquired by rote.

Example

- ☐ A 6-year-old child observes two identical sets of objects and says the number is the same. He counts and finds five in each set. The objects in one set are then spread apart. The child now says there are more in the spread-out set. Even if asked to count again and he finds five in each set, the child will often say that one set is more. The child will not be convinced that the sets are still the same.

(Adapted from Copeland, R. W., 1984)

Implications

- ☐ Since teachers can't tell or explain, the purpose of activities should be to help students discover mathematical concepts rather than prompt the student to give a particular answer.
- ☐ Children should be encouraged to ask and answer questions which reveal their level of understanding.
- ☐ Careful questioning and open-ended suggestion is the most appropriate teaching strategy.
- ☐ Activities should weave together the various major strands of mathematics and also show how to apply mathematical thinking in the other content areas.

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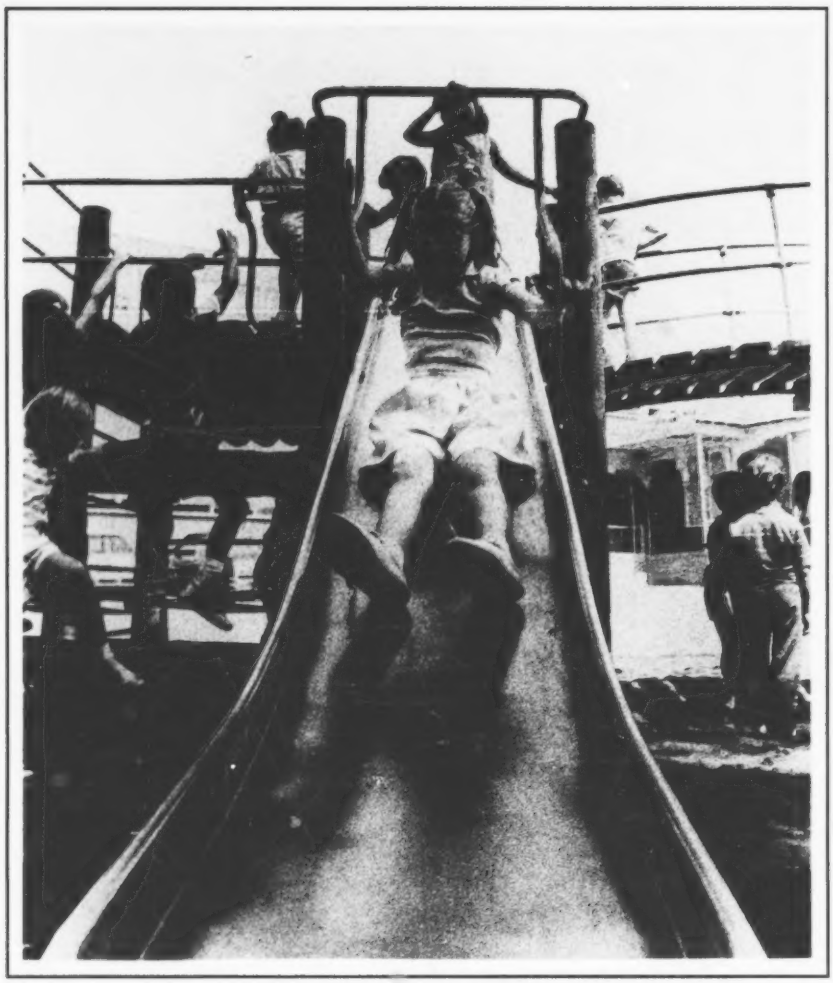

5

Developing Through Physical Education, Health And Safety

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Developing Through Physical Education, Health and Safety

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Movement is basic to life. Even prior to birth babies move their arms, legs and heads. Movement continues after birth with a greater degree of sophistication. Eventually, crawling patterns lead to creeping patterns and then to the development of walking patterns. By the time youngsters are 5 they have acquired a variety of movement patterns.

The kindergarten year is a time when these movement patterns should be refined and developed further through a planned, developmentally-sound program. Kindergarten children should be provided with many opportunities to interact with their environments in order to learn about safe practices, healthy habits and their physical capabilities.

It does not take a trained or a critical eye to conclude that kindergarten children are inherently active. These youngsters learn much of what they are exposed to through active participation, an important component of which is gross motor development.

Montessori, Piaget and others recognized the importance of motor experiences in the learning processes of children. Delacato and Kephart conducted studies indicating that children who may be deficient in certain academic competencies can be helped through a perceptual motor program.

Although not conclusively demonstrated through research, it might appear that a certain stage of neuromuscular development needs to occur for optimum academic development. In a more practical sense, a healthy mind in a healthy body will help to foster more efficient learning.

The kindergarten program should include opportunities for children to develop and maintain healthy minds and bodies by integrating movement and aspects of health and safety with other curriculum areas. To ensure that this integration occurs, certain essential elements should be included in the program.

Philosophy and goals

Every physical education, health and safety program should be based on a statement of philosophy and set of goals which reflect and are consistent with the overall philosophy, goals and objectives of the school district.

Program philosophy. A philosophy statement will justify the inclusion of physical education, health and safety in the curriculum and will give direction for program development. A statement applicable to a kindergarten program should recognize the inherent need for children of this age level to be active, explore movement, acquire basic physical skills, develop acceptable social behavior, understand themselves and their environment and learn about safe and healthy habits and practices.

Program goals. Program goals for kindergarten physical education, health and safety should meet the varied needs of this age group and should reflect the need for integrating subject areas. Some suggested goals are:

A. Organic development

- ☐ help children to maintain a desirable level of health and fitness; and
- ☐ help children to gain knowledge about the care of their bodies and ways to protect and improve their health.

B. Psychomotor development

- ☐ help children to become competent in management of their bodies and to acquire basic physical skills; and
- ☐ help children to learn the skills necessary for safety and health.

C. Cognitive development

- ☐ help children to improve knowledge, sense perception, judgment, memory, imagination, creative thinking and reasoning necessary to perform physical skills; and
- ☐ help children to evaluate their own health and safety practices.

D. Affective development

- ☐ help children to express an appreciation of self and others;
- ☐ help children to express feelings and emotions; and
- ☐ help children to develop desirable standards of conduct.

Research findings, needs and implications for learning

The characteristics of kindergarten children, their needs and interests and relevant research provide the basis to plan learning experiences in physical education, health and safety.

The growth of kindergarten children is steady and slow. Large muscles are better developed than small ones. Bones are somewhat soft and muscular strength is limited. The heart and lungs are small in relation to height and weight. Various parts of the body develop at different rates. Legs grow faster than arms; arms grow faster than the trunk and the trunk faster than the head. The heart grows rapidly. Walking and running patterns are well established and climbing is natural. Children are very active but are easily fatigued. Fine motor control of fingers and hands is incomplete. Motor skills are unevenly developed.

Young children are sensitive and individualistic; they are curious and eager to perform. Their attention spans are usually short. Childen's anger is provoked when they are confronted with difficult or confusing situations that are beyond their levels of skill development. There is a rapid expansion of both understanding and use of language. Intellectual curiosity is expressed by asking many questions.

As perceptual motor development proceeds, children have an increased capacity for handling more complex and increased quantities of sensory input. They improve their capacities to execute more skillfully complex and adaptive motor behavior and are able to see more complex interrelationships and spatial arrangements.

The use of color can serve as a motivating factor for motor performance, while spatial and dimensional cues should be appropriately placed to aid kindergartners with depth perception. While boys and girls are about equal in their motor development, there are marked differences in individual readiness for learning motor skills.

Needs and interests. The needs and interests of kindergarten children include large muscle activities, frequent rest periods, exploring a variety of locomotor movements, using manipulative objects, exploring skill ability by interacting with a variety of equipment, experiencing success, involvement in cooperative endeavors, awareness of safety, development of self-concept and learning sound health habits.

Implications for learning. A physical education program designed to meet the needs of kindergarten children should focus on movement exploration, positive self-concept, constructive attitudes and sound health and safety habits. The instructional program should feature a variety of activities, including:

- ☐ exploratory movement — climbing, hanging, swinging, supporting the body in various positions;
- ☐ the use of a variety of equipment — ropes, hoops, balloons, balls, mats, balancing and climbing apparatus, bean bags;
- ☐ perceptual motor experiences related to laterality, directionality, balance and coordination;
- ☐ combining rhythm with fundamental skill development;
- ☐ basic fitness activities;
- ☐ exercises for posture;
- ☐ development of healthful attitudes, behaviors and habits; and
- ☐ understanding personal safety, anticipating hazards and reporting emergencies.

The program should provide for a spirit of cooperation and sharing, developmentally appropriate skill development and opportunities for building self-confidence. Appropriate activities contribute to the development of listening and speaking skills, reinforce spatial concepts and encourage thinking by presenting problem-solving tasks. Experiences which relate to the child's world should be emphasized, for it is through activities such as movement exploration, practicing safety procedures and performing healthy habits that young children learn about themselves, who they are, what they can do and how they relate to the world around them.

At this level, physical education, health and safety provide opportunities for children to begin to lay the foundation for body management, basic motor skills and positive attitudes and behaviors, taking into consideration the child's health and fitness needs. Development of eye-hand coordination through simple manipulative activities should be encouraged.

Well-planned experiences should be geared to meet the divergent developmental needs of all children — the gifted, the average, the slow learner and the mentally, physically and emotionally handicapped. Parents should be encouraged to take an active part by understanding the basic principles of the program and by helping their children to follow through with activities for learning at home.

Concepts and content

The content of the physical education, health and safety program in kindergarten should provide an abundance of activities which take into consideration the following suggestions:

- ☐ health-related fitness
- ☐ body management
- ☐ manipulative skills
- ☐ rhythms
- ☐ apparatus, stunts and tumbling
- ☐ environmental health
- ☐ disease prevention
- ☐ the human body
- ☐ self-image
- ☐ nutrition
- ☐ personal health
- ☐ substance use and abuse
- ☐ first aid
- ☐ accident prevention
- ☐ personal safety and safety at play

Suggested concepts and activities for the 15 areas identified — including ideas for integration with other subjects — follow:

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Health-Related Fitness

Concept 1:
Exercise affects the body in different ways.

Activities (have the children):
- ☐ run a short distance
- ☐ discuss why they are breathing rapidly

Science
- ☐ look at pictures of the heart
- ☐ discuss how the heart acts as a pump

Mathematics
- ☐ count the number of breaths they take in 10 seconds immediately after running a short distance
- ☐ compare this with the number of breaths they take after a few minutes have elapsed

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Body Management

Concept 2:
The body can be controlled and balanced in a number of different positions.

Activities (have the children):
- ☐ change the sizes and shapes of their bodies by asking questions such as: "Can you be very big, very little?" "Can you balance on one foot?"

Language Arts
- ☐ make their bodies look like the letters T, L, I, O, P, etc.

Social Studies
- ☐ draw lines on the floor in a grid pattern
- ☐ name the lines for the various streets near the school
- ☐ balance carefully while walking the lines (streets) by placing one foot ahead of the other in a toe to heel fashion

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Manipulative Skills

Concept 3:
Play objects can be manipulated in a number of different ways.

Activities (have the children):
- ☐ balance a bean bag on different parts of their bodies
- ☐ toss and catch a ball to themselves and to a partner

Language Arts
- ☐ throw a ball *through* a hoop, *under* a wand and *over* a net, etc.
- ☐ reinforce the learning of the words through, under and over

Mathematics
- ☐ place numbers all over the wall and practice tossing a ball by aiming at the numbers
- ☐ call out the various numbers they hit (or have the teacher call out a number for the children to recognize and aim for)

Rhythms

Concept 4:
Dance is expressive movement adapted to communicate an idea, mood or feeling.

Activities (have the children):
- ☐ move expressively to a rhythm by asking questions such as: "Can you move softly?" "Can you move to show you are happy, sad?"
- ☐ perform contrasting movements to a rhythm by asking questions such as: "Can you travel feeling very tall?" "Very small?"
- ☐ perform to various tempos all forms of locomotion such as running, skipping, hopping, jumping, etc.

Music, Arts and Crafts
- ☐ perform movement patterns to rhythm instruments such as a drum, tambourine, or student-made instruments
- ☐ imitate the movement of animals or objects such as an elephant, kangaroo, rocket, etc.

Music and Language
- ☐ perform singing games and act out story plays which they help to create

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Apparatus, Stunts and Tumbling

Concept 5:
Apparatus activities provide opportunities to support and manage the body free of ground support.

Activities (have the children):
- ☐ discover a number of different ways to mount and dismount and to walk on a balance beam

Science
- ☐ discuss how a pendulum swings and have them run, jump, grasp a rope and swing like a pendulum
- ☐ crawl over auto tires placed on the floor in a zig-zag pattern; then jump from one tire to another without falling off
- ☐ climb ladders, portable climbing equipment and geodesic domes

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Environmental Health

Concept 6:
The health of the community is a cooperative responsibility shared by individuals, families and communities.

Activities (have the children):
- ☐ discuss ways to cooperate with others to promote a healthful environment at school, in the home and in the community

Language Arts
- ☐ develop a short play around themes such as disposing of litter properly

Social Studies and Art
- ☐ design a bulletin board which identifies different categories of community health workers

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Disease Prevention

Concept 7:
Prevention and control of many diseases and disabilities is achievable.

Activities (have the children):
- ☐ discuss the difference between wellness and illness and ways in which diseases are spread
- ☐ discuss ways to protect themselves and others from disease

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The Human Body

Concept 8:
The body is made up of many systems which work together.

Art Activities (have the children):
- ☐ draw pictures of themselves or trace themselves on large pieces of paper and identify verbally the major body parts

Science
- ☐ identify a number of living animals or human beings and have them recognize that each one is the offspring of another
- ☐ discuss the five senses and experience touching different textures, hearing different sounds, tasting different tastes, etc.
- ☐ use a stethoscope to listen to heart sounds

Self-Image

Concept 9:
A positive self-image enhances learning and contributes to good mental health.

Activities (have the children):
- ☐ identify positive qualities of themselves and others

Language Arts
- ☐ read stories which portray success such as *The Little Engine That Could* or provide students with an opportunity to succeed in a variety of activities
- ☐ illustrate ways in which actions or words make one feel happy, wanted or missed

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Nutrition

Concept 10:
Food is the source of nutrients for maintaining a healthy body.

Social Studies Activities (have the children):
- ☐ discuss the different food choices of various ethnic groups

Art
- ☐ make dolls from different countries, have a doll party and serve the dolls the foods representative of their countries
- ☐ classify food according to food color groups, using pictures from magazines and pictures they have drawn
- ☐ analyze personal food choices and their snacks for nutrition

Mathematics and Science
- ☐ prepare foods for snacks and count the servings for each child

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Personal Health

Concept 11:
There is a relationship between personal behavior and wellness.

Activities (have the children):
- ☐ discuss personal habits of cleanliness and good grooming
- ☐ groom their dolls by brushing their teeth, combing their hair and washing their hands
- ☐ describe the difference between feeling "good" and feeling "bad"

Substance Use and Abuse

Concept 12:
Substances can be beneficial and harmful and should be handled with care and caution.

Activities (have the children):
- ☐ identify substances which are harmful and helpful or walk around the school and identify plants which are harmful or allergenic and identify the poison sign

Science
- ☐ collect plants which are not harmful and press them in waxed paper

Art
- ☐ consider ideas for a "no smoking" poster and have some children help to draw the poster

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First Aid

Concept 13:
Emergency situations should be reported immediately.

Activities (ask the children what they would do if):
- ☐ they were bitten by a neighbor's dog
- ☐ a friend fell from the swing set
- ☐ they cut themselves when using a knife
- ☐ their mother was upstairs and they knew that she would be angry at them for using the knife
- ☐ they had to report an emergency (Using toy telephones, have them learn to dial the emergency number 911 or applicable number for your town.)

Accident Prevention

Concept 14:
Common accidents can be prevented.

Activities (have the children):
- ☐ take a tour of the school, both inside and out. Ask them questions which will alert them to various safety features such as handrails, fire extinguishers, fences, floor mats, etc. Invite members of the safety patrol to talk with the children about how they became safety patrol members and what they do.

Art
- ☐ talk about the safe use of scissors, pencils, paint brushes and glue; have children safely use the objects

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Personal Safety and Safety at Play

Concept 15:
Play can be both fun and safe.

Activities (have the children):

- ☐ go to the playground, talk about and demonstrate the safe way to use each piece of equipment. For example, stand to the side of the swings; wait until the swing stops before getting off.
- ☐ talk about what to do if a stranger approaches, or if the child is abducted or sexually abused

Language Arts

- ☐ tell what they like to do best when they go to the playground. Have them include a safety tip.

Administrative procedures

The following issues and procedures will help to ensure an adequate program of physical education, health and safety for kindergarten children:

Time allotment. The ideal time plan for physical education should provide for a 20-minute daily period of planned activities. Health and safety concepts should be integrated into the weekly schedule as subject content raises opportunities.

Personnel. A certified physical education teacher should provide activities for kindergarten children. When such personnel are unavailable for daily instruction, the kindergarten teacher should be provided with appropriate resources to follow up with the activities presented by the physical education teacher on a less than daily basis.

Health teachers and school nurses can work directly with the children periodically and serve as resources, providing the kindergarten teacher with appropriate materials on a continuing basis.

Facilities. A gymnasium, cafetorium or activity room should be available for indoor space. These areas should have a minimum of 70 square feet per preprimary child.

An outdoor area for preschool and kindergarten children should be adequate in size and should be fenced off and separated from the general playground. This area should consist of a grass area, a hard surfaced area and an area with climbing structures and other suitable apparatus placed so that children are adequately protected if they fall.

Equipment. A wide variety of equipment and supplies should be provided. Some ideas for equipment and supplies are:

Equipment	Supplies
balance beam (low)	balloons
balance board	bean bags
batting tee	cones (markers)
climbing ladders and apparatus	foam balls (various sizes)
climbing ropes	Hula Hoops
geodesic dome	jump ropes and stretch ropes
Jungle Gym	plastic bats
mats	rubber balls (various sizes)
record player and records	scoops
scooterboards	wands
slides	yarn balls (various sizes)
swings	
tape recorder and tapes	

Resources

Printed Material

American Alliance for Health, Physical Education, Recreation and Dance, P.O. Box 704, Waldorf, MD 20601

Children Learn Physical Skills
Annotated Bibliography on Movement Education
Annotated Bibliography on Perceptual Motor Development
Essentials of a Quality Elementary School Physical Education Program
Lifetime Health-Related Fitness Test Manual
Health Education Teaching Ideas: Elementary

American Heart Association. *Putting Your Heart Into the Curriculum: Primary Level K-12.* AHA, 7320, Greenville Ave., Dallas, TX: 1982.

Bengtsson, Arvid. *Adventure Playgrounds.* New York: Praeger Publications, 1972.

California State Department of Education. *Physical Education for Children In California Public Schools, Ages Four Through Nine.* Sacramento, CA: 1978.

Cratty, B. and Szczepanik, M. *Sounds, Words and Actions: Movement Games to Enhance the Language Arts Skills of Elementary School Children.* Freeport, NY: Educational Activities, 1971.

Connecticut State Department of Education, P.O. Box 2219, Hartford, CT 06145

A Guide to Curriculum Development in Family Life Education, 1981.
A Guide to Curriculum Development in Health and Safety, 1981.
A Guide to Curriculum Development in Physical Education, 1981.
A Guide to Curriculum Development in Special Physical Education, 1981.

Fait, Hollis and Dunn, John. *Special Physical Education: Adapted, Corrective, Developmental.* 5th edition. Freehold, NJ: W. B. Saunders Publishing Co., 1982.

Florida Department of Education. *Moving to Reinforce Reading and Physical Education Skills: Integrated Activities for Early Childhood Education.* Tallahassee, FL: 1980. (Copies available at the Connecticut State Department of Education, Box 2219, Hartford, CT 06145)

Oregon Department of Education. *Planning Health Education in Oregon Schools - Safety.* Salem, OR: 1979.

U. S. Consumer Products Safety Commission. *Toy Safety* and *Poison.* United States Consumer Products Safety Commission. Washington, D.C. 20207.

Nonprint Material

Agency for Instructional Technology, Box A, Bloomington, IN 47402

Leaps and Bounds. (1984) A series of 16, 15-minute programs on movement education.

Ready Set Go. (1969) Level I. A series of 30 television lessons, 20 minutes each.

Educational Activities, 10 Fenwick St., Newark, NJ 07114. Records and tapes for health and physical education.

6

Discovering The World of Science

Discovering the World of Science 6

This chapter on science is intended to help teachers implement those aspects of quality programming that encourage curiosity, exploration and problem solving in young children as they strive to understand the physical and biological world in which they live.

Throughout this guide we have reinforced the appropriateness of active engagement as a most effective method for children to experience learning. Humans are inherently curious. The quest for solutions to unanswered queries is perhaps the greatest contributor to the continual advancement of civilization as we know it.

Opportunities to learn science happen frequently in kindergarten classrooms. Teachers who are unprepared to capitalize on the informal science-learning potential in their classrooms may miss critical opportunities to encourage developing science appetites. Continued inattention to the science questions that children ask and the failure to recognize the science in students' activities may discourage or retard their natural science inclinations and competencies.

Young children frequently inquire about their natural surroundings. Those childhood questions of why, what, when and how, among others, that teachers are frequently asked are reminders of this wonderful urgency on the part of children to learn. How teachers respond to these inquiries helps determine the child's disposition toward continuing in this aggressive mode. The role teachers play in preparing environments that give permission to the child to ask questions, explore, take risks and apply past learnings supports and embellishes this instinctual childhood characteristic. Likewise, failure to nurture this instinct will greatly contribute toward its underdevelopment, which may have lifelong consequences for the child. An observance of nature helps illustrate this point:

> In any given seed is the genetic material that will enable it to grow. The tiniest seed will sprout in the absence of light; an almost imperceptible amount of moisture signals the seed to send out shoots, and for a short while little green leaves that hint at the transformed potential of the seed are evident. Without the nurturing qualities of fertile soil and the constant gentle care of the gardener, the vulnerable sprout dies and the potential for fruit-producing branches and a sturdy trunk with deep roots that provide the energy and raw material for new products and cool shade is lost forever.

This guide to science seeks to nurture the inquiring nature of the kindergartner. Classroom support that is provided will nurture the innate potential in children and facilitate the transferability of what is learned through these experiences to solving problems they may encounter in the future.

Defining science

A precise definition of science may not serve as a direct benefit to kindergarten teachers who are seeing science happen before their very eyes. It

is important, however, for them to have a working or conceptual definition that is compatible with a concrete, experience-oriented, interactive curriculum.

The kindergarten teacher whose orientation is consistent with the philosophical intent of this guide understands that the *process of sciencing* is useful because this term accommodates most of the significant interactants in the experience — child, materials, prior knowledge and teacher.

"Sciencing" in a developmentally appropriate kindergarten is a process through which children use acquired knowledge and apply mastered skills to answer previously unanswered questions regarding the physical and biological world in which they live. This process develops and extends children's abilities to make careful and accurate observations, to group and regroup objects into classification schemes of their own choosing (and later the classification schemes of others), to extend their thinking beyond what is observed directly and to make inferences. At all times, science should help children to develop the ability to communicate what they are doing or have done in order to clarify their own thinking, share their findings and compare their results.

The "Operational Definition" on page 91 suggests clearly that science for the kindergarten child and teacher is a dynamic and constantly changing process. Formal definitions of science include science as a body of knowledge and an ongoing, self-testing process of inquiry; science as the study and interpretation of the world around us; and science as a way of thinking and arriving at new knowledge and conclusions.

Philosophical support

Research in the teaching of elementary school science has provided considerable information, much of it in terms of what young children are capable of learning. We know for example, that they can learn to observe, to classify, to measure, to inquire, to infer. Further, we know that these skills can be acquired at an early age and that children improve in their understanding and use of skills as they grow older.

Support for the experience-based science curriculum is deeply rooted in the expansive work of Jean Piaget, whose research findings (1983) mandate that the learning environment for young children be rich in physical experiences. Although Piaget's developmental theory is complex, it has contributed significantly to our understanding of how children learn. Piaget insists that children learn by reinventing and reorganizing experiences, not by adding new increments of learning to an old knowledge base. This reorganization in the child is a creation of the processes of biological maturation, knowledge and autoregulation (Kuslan, 1972).

Piaget has supplied solid evidence that children should be immersed in an extended series of active learning experiences during their formative years. The essence of learning at the kindergarten level is not only in being exposed to experience, but to active reaction, exploration, feeling and experiencing through group interaction. Piaget's insistence that each developmental stage must be properly formed before the next stage can be fully formed should be noted by all teachers and curriculum development teams. Piaget argues for an open, unstructured, highly enriched learning environment for children.

Piaget insisted that each developmental stage must be properly formed before the next stage can be fully formed.

In apparent contrast, Gagnè (1965) developed an approach to science learning based upon a structured order of learning hierarchies. Gagnè proposes that all learning tasks are made up of a series of subtasks; to master major tasks, children must first master the subtasks. Therefore, if a teacher properly structures the learning environment, the desired learning will follow. Successful learning in this model is based upon the mastery of process skills.

An Operational Definition of Science

When you ask...
Why are babies born so small,
Where are their teeth, and hair and all?
What makes them want to suck their thumb?
Why can't they walk, and jump, and run?
That's science.

When you say...
How come John's the oldest brother,
And I have to be the other?
Will he always be the tallest?
Will I grow up as the smallest?
That's science.

When you wonder...
Why are robins' eggs so blue?
Do people lay eggs as they do?
If birds can fly and people can't,
Why can't a dog, or cat, or ant?
That's science.

When you want to know...
Can apples grow on maple trees?
Are you sure milk is good for me?
Are 2 and 2 always 4?
Does every room have a door?
That's science.

When you see...
That flowers don't grow when it snows,
That all kites need a wind that blows,
Some birds are red, some blue, some brown,
And a wheel, to roll, must be round.
That's science.

All the things you want to know
About yourself and how you grow,
About the world in which you live,
What you can think, and find, and give.
That's science.

Smith, Evelyn. "An Operational Definition of Science." Reproduced with permission from *Science and Children*, March 1974. Copyright 1974 by the National Science Teachers Association, 1742 Connecticut Avenue, N.W., Washington, DC 20009.

Upon careful analysis it becomes clear that Piaget's concepts of intellectual development can be meshed with Gagnè's process skills format for learning. The result is a psychologically sound approach to structuring an inquiry-oriented science program. Such a program must have a solid base at the kindergarten level if it is to succeed.

Children are capable of learning a great deal, and knowing how to assist them in their learning is useful. But such knowledge does not solve the problem of what children shall learn.

The role of home and family

When children enter kindergarten they bring with them the learnings from many explorations. They already know much about science. Children who come to kindergarten from homes where inquiring minds are encouraged reach out for the new experience which the school has to offer. These children often are self-directed, poised, inquiring and willing to try again after failure. A positive home environment fosters learning and permits children to develop the science process skills of observing, classifying, measuring, using spatial relationships and numbers, communicating, predicting and inferring.

Support for families that cannot provide the stimulation that encourages these benefits can be facilitated through a curriculum that sensitively engages parents in managing their child's curiosity. Guidance for families detailing the reasons for and benefits of encouraging a child to ask questions and explore possibilities will support his or her inclination toward science, while providing long-term benefits for the family.

Parents and teachers who help children to explore, discuss and generalize also help children to develop confidence in their power of thinking and in working on their own problems. Building this confidence in self, while encouraging curiosity and creativeness, is to lay the foundation for future scientific thinking.

The role of the teacher

Once kindergartners are in school, the teacher should keep the children involved in inquiry-based science learning. When children raise questions, teachers should take a mental inventory of the available information which indicates the internal readiness and capability of the children to resolve their problems. An assessment of the competencies children have that will lead them to a better understanding of the problem, as well as to finding a solution, will provide the teacher with insight as to how much and what type of intervention is required. Children who ask questions of adults are children who trust adults and feel secure in their presence. The teacher, however, should not always be the final authority. The role of the teacher is to listen to children's questions to find out what they are really asking, help them to ask good questions (a major step in the learning process), and to provide space, materials and experiences that promote feelings of success.

Children bring experiences and conclusions to the classroom that have been arrived at through a testing and confirming process. An informal assessment of childhood interests or experiences allows a teacher to determine how science can extend that knowledge. Teachers also should find opportunities to introduce scientific novelty. (Remember: what is novel to some children may be a well-developed and practiced concept to others.)

Teachers should find opportunities to introduce scientific novelty.

Competence development literature has long supported the notion that humans rely heavily on modeling as a primary learning technique. This

concept has tremendous implications for the classroom. Teachers can enhance greatly the practice of science and utilization of scientific processes if they create opportunities for young children to observe them (teachers) practicing science. Teachers can chart the proportions of two colors of paint that, when mixed together, form a third color. This example encourages the scientific concepts of predictability, replicability and standard comparison. Permitting a child to assist in repotting plants, making a salad or repairing the aerator in a fish tank also are examples of how a teacher's practice of science can benefit and encourage students.

The teacher's role is to raise issues, supply relevant data, help to record ideas or theories, assist in developing hypotheses which can be tested and create opportunities for students to reinforce, practice, consolidate and extend new and prior scientific learnings. Students like to feel that the teacher shares in their problems. Teachers also can reinforce clear thinking and help to increase standards with such remarks as, "That was a great suggestion. It really helped us." "I did not realize that until I saw your data." "Your picture (record) shows so much detail."

Childhood competencies

Process-oriented learning that provides firsthand experiences with objects and events is the key to intellectual development in young children. This kind of learning experience is easily achieved through science activities which encourage children to observe, question, predict, gather data, conclude and make generalizations.

During kindergarten, children begin to develop their abilities to classify objects, coordinate relationships and think quantitatively. Classification, quantitative skills and measurements are examples of what Piaget calls *operations;* actions on concrete and relatively nonsymbolic objects (1967). Most children move through the intuitive stage between the ages of 4 and 7. From this base they move on to the mental-concrete operation phase.

Distributive science programming

The attributes associated with the developmental characteristics of kindergarten children present opportunities for rich distributive curriculum programming. The cornerstones of basic science — observing, questioning, experimenting, confirming — are qualities that are valuable and worth reinforcing in other curriculum areas. Childhood desires to distinguish objects or collections by selected attributes (color, shape, size, weight, temperature, etc.), or to test the consistency of one's actions on an object, are often played out in more than just science-labeled activities. Riding toys, block building, art, water tables, cooking and almost any curriculum area provide opportunities for science to be learned and practiced. Identifying science opportunities in these areas and planning to utilize this incidental learning are strongly encouraged.

Riding toys, block building, art, water tables, cooking and most curriculum areas provide opportunities for science learning and practice.

Science can be integrated in many ways into other curriculum areas. Process skills of observing, classifying, measuring, using space or time relationships, numbering, communicating, predicting and inferring all can be viewed in a multidisciplinary format. Likewise, topical studies such as nature around the seasons, winter weather, birds of spring and fall, sound and color can bridge many curriculum areas.

Science in the kindergarten classroom should not be treated in isolation. It should be viewed as an opportunity for children to observe and interact with their world, which includes biological, physical, earth and chemical branches of knowledge. Science should be a springboard that leads to integrated learning programs involving art, mathematics, language

arts, social studies, music and physical education, among other learning areas. The potential to use and practice science is distributed across the activities of the entire day. Inquiry and critical thinking cannot be confined to certain science topics or units. "Show and Tell" time is full of opportunities to build new vocabulary, clarify meanings and work on concept formation. Throughout the day there are opportunities for children to solve problems, observe, explore, organize, experiment and to ask and answer their own questions. Children who face real problems and work on solving them cannot help but use scientific thinking skills.

Effects on other learning

Science skills enhance reading, mathematics and critical thinking skills.

The benefits of teaching science extend beyond those outlined in this chapter. There is considerable research literature showing that science skills enhance reading, mathematics and critical thinking skills. This is particularly true if the science skills are learned in a program that emphasizes processes and provides children with firsthand experiences with objects and events (Mechling, 1983).

Inquiry-based curriculums appear to be superior for developing processes of scientific investigation. Furthermore, children involved in active-inquiry science programs show greater gains in reading, mathematics and social studies as they progress through elementary school than those involved in science programs which lack active involvement.

With the use of activity-based science programs, teachers can expect substantially improved involvement in science process and creativity; modestly increased understanding of perception, logic, language development, science content and mathematics; modestly improved attitudes toward science; and pronounced benefits for disadvantaged children (Bredderman, 1982).

The evidence is clear. Activity-based science programs foster success in other curriculum areas. Quality science instruction in kindergarten will start children on a lifelong journey of critical analysis and learning that will help them to become sensitive, informed and scientifically literate adults.

Teacher-directed science instruction has given way to process-oriented, hands-on approaches. Science or sciencing (Cain and Evans, 1979) is beginning to be seen as a means rather than an end product. To be successful with this approach, the learner must develop process skills. The following basic process skills and curriculum activities are appropriate for kindergarten.

Process Skill 1: Observing

Using the senses to learn about objects and events

Instructional activities: Observational skills can be developed by involving children in activities that center around the perception of color, shape, texture, odor, taste, temperature, size and sound. For any kind of study or work, a child should learn to make visual observations. The child may be asked to describe what he or she sees in a variety of places and situations. This skill will help the child to make precise descriptive statements, not only at this level, but also in the future. Teachers can ask their students to look at a flower, vegetable or leaf and tell what they see, feel and smell.

Process Skill 2: Classifying

Grouping objects according to similarities or differences

Instructional activities: Given a collection of objects such as leaves, seeds, nuts, buttons or attribute blocks, children can group the objects according to observed similarities or differences. Classifying is a basic skill in science and in other areas of study. Sorting, arranging and classifying require sufficient study of a material(s) so that the similarities and differences may be noted in specimens. On the basis of these similarities and differences, specimens of the material can be classified into a limited number of groups.

Process Skill 3: Measuring

Making quantitative observations by comparing one physical aspect of an object or event with a standard unit

Instructional activities: Given sets of objects with different lengths, masses, volumes or areas, students can compare objects within a set with each other or a standard unit to determine relative lengths, masses, volumes and areas. The child makes comparative observations such as "longer than" or "shorter than". The child learns that he or she can refine the process of measurement by using a single standard for matching, as in matching two objects with a third and not directly with each other. This exercise helps the child to develop the concept of a standard.

Process Skill 4: Using Spatial and Temporal Relationships

Making qualitative observations about the relationship of objects or events to each other in terms of location and time

Instructional activities: Skills in using spatial relationships can be developed by providing children with experiences in observing movement, determining direction, measuring distances, timing activities and defining time intervals.

Process Skill 5: Using Numbers

Numbers are used to make quantitative statements about objects and events

Instructional activities: Given a collection of objects, children can arrange the objects into groups, develop systems for ordering the objects into patterns, describe numerical relationships among the objects and count the objects. The word *set* can be introduced as being synonymous with *collection* or *group*. Children will learn to use these terms in a simple and natural way as a substitute for other expressions, such as bunch or team. The terms *set* and *member of a set* will give children an easy and precise way to communicate and also will help them to develop the ideas of numbers and counting. In counting, for example, we count members of a set (or collection or group) of objects.

Process Skill 6: Communicating

Using the spoken word, drawings and the written word to transmit ideas and information to others

Instructional activities: Given an object, children can describe the object by telling about its properties, drawing a picture or listing simple words that describe their observations of the object. It is important that children develop the ability to observe and describe changes which may occur in an object's appearance. It is of equal importance that children be able to describe each stage of change which is observed. This skill is a prerequisite for the collection of data in any area of study. Kindergarten children may draw pictures to report on their observations (data collected).

Process Skill 7: Predicting

Making forecasts of future events or conditions based upon observations or inferences

Instructional activities: Given a simple experiment or event, children can explain what might happen when one of the variables involved is changed or a new variable is introduced. For example, they might be asked to predict what will happen if two balloons, one filled with air and one with helium, are released in the classroom. Another example would be to have children predict the outcome if the balloons were to be kept in the classroom overnight and the experiment repeated the next day.

Process Skill 8: Inferring

Providing an explanation for an observation or a set of observations

Instructional activities: Given the balloon activity just described, a child can infer what caused the helium-filled balloon to rise to the ceiling the first day and fall to the floor the second day.

The science curriculum for kindergarten can integrate these eight process skills into a meaningful and challenging format. As the curriculum is designed, implemented and evaluated, careful attention should be given to the way in which the curriculum relates to the children's levels of intellectual development.

The purpose of teaching and learning science in the kindergarten is not to learn how to perform as a scientist or worker in another area. Rather, the purpose is to assist children in building skills and concepts which will enable them to cope more effectively with objects, forces and events which comprise their environment.

Manipulation of materials is crucial. In order to think, kindergarten children need to have objects they can handle and work with. This does not mean test tubes, beakers and other scientific equipment one finds in a high school or college laboratory. But it does mean using such items as seeds, plants, balance boards, paper bags, construction paper, balloons, glue, drinking glasses, solid objects (cubes, squares, spheres) and nuts.

Assessing classroom potential

If the approach encouraged throughout this chapter is different from that currently being practiced, the teacher may need to examine classroom areas and materials to determine if adequate opportunities are available to stimulate new science thinking in children, while extending and consolidating prior learning. The following instruments are examples of a design to help identify the science potential of the teacher's curriculum areas.

Design I assists the teacher in determining the science potential in the existing block area. Each piece of equipment (by type) is analyzed for its science potential. This assessment approach can be helpful in determining if available resources are adequate to meet future science objectives.

Design II requires that the teacher indicate the concepts or objectives to be explored or reinforced in the activity area. If the equipment needed is not on the equipment available list (Design I), then new resources will have to be obtained. The teacher is required to predict the expected outcomes based on the equipment that will be availale, the interaction and support the teacher intends to provide and what he or she knows about how children play.

Design I
Assessment of Existing Science Potential in Activity Centers

Area Name	Equipment Available	Science Potential
BLOCKS — The activity center is designed to encourage the manipulation of wooden blocks for vertical and horizontal construction. This center supports the extension of building to encourage role-taking and situationally-specific drama.	2 sets, wooden blocks	Balance, proportions, leveraging
	4 inclines	Elevation, speed, spatial orientation
	2 unit blocks with hooks	Elevation, mechanics
	2 unit blocks with pulleys	Elevation, mechanics
	6 curved units	Spatial relationships
	1 waterway	Floatation, currents, habitat, wind
	Spool of string	(Facilitator)
	Scaled support toys (farm animals, trees jungle animals, barnyard)	Habitat, species identification
	Gear set	Mechanics of motion
	Bridges	Spatial relationships
	Wheels	Motion, conveyance, mechanics
	Spools	Mechanics, conveyance, motion

(Design II appears on next page)

Design II
Planning for Science Learning in New Activity Centers

Identified Objectives	Equipment Needed	Expected Outcomes
BLOCKS provide opportunities for block-builders to practice science concepts through a child-initiated mode.		
Exploring height (Concept: measurement)	Unit blocks, pulleys, hooks, yardstick, columns, floorboards	Children will gain insight and facility in measuring vertical scales by "building tall".
Exploring width, breadth (Concept: measurement)	Units blocks, floorboards, tape measure, yardstick.	Children will gain insight and practice in measuring horizontal space by "building wide".
Weight and balance	Levers and pulleys, complete set of unit blocks, right angle blocks.	Children will explore concepts of stability and its relationship to weight, balance and height.
Machines and mechanics	Pulley, levers, string gears, magnets, batteries, bell set.	Children will explore machine utility by creating instruments to extend established play themes.
Spatial relationships	Tunnels, support toys, waterway, bridges.	Children will explore dimension and perspective by building over, under bridging, etc.
Habitat	Waterway, support toys, barn, scaled trees.	Children will explore and identify the natural habitat of familiar animals and learn animal names.

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Resources

American Association for the Advancement of Science (AAAS) — "Science: A Process Approach" (SAPA). Distributed by the Xerox Corporation, Boston, MA, and Stamford, CT. (Check with a college curriculum library for information on how to obtain parts A and B of this program.)

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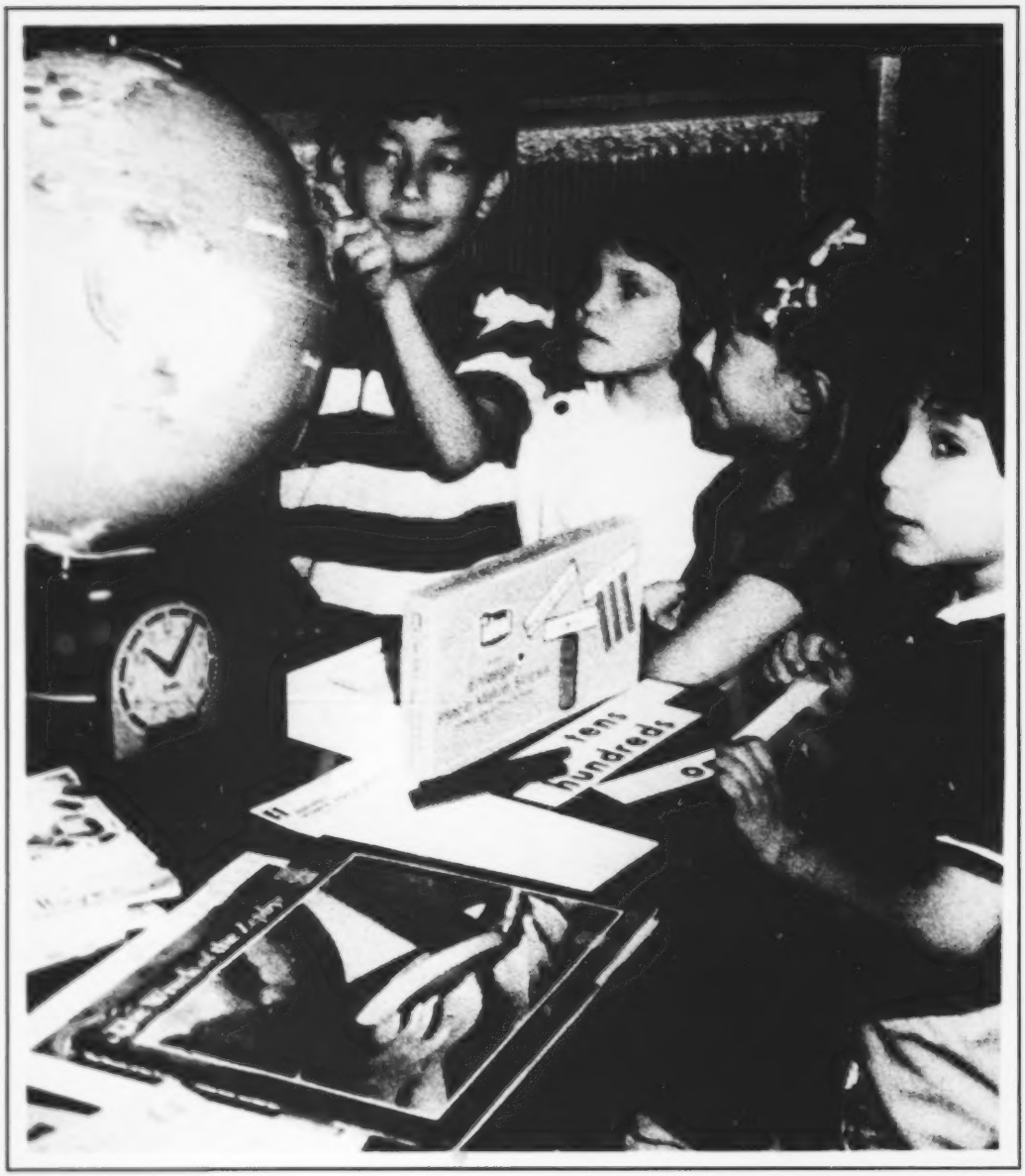

7 Examining The Social Studies

Examining The Social Studies 7

"Social Studies is a fundamental and essential subject area for teaching and learning in early childhood" (Pagano, 1978, p. 4). In kindergarten, where programs seek to support children's total developmental needs (physical, social, emotional and intellectual), the social studies can serve well as an integrating force. And since the social studies deal with the "totality of human experience, past and present," they are fundamental because they will make children aware of their cultural heritage and will enable children to understand and participate more effectively in their society and the world. The integration of skills and knowledge becomes a foundation for participating as responsible family, school and play group members, and for developing the concepts, skills and behaviors essential to becoming responsible citizens of the community, state, nation and world.

Rationale for social studies in kindergarten

"The basic goal of social studies education is to prepare young people to be humane, rational and participating citizens in a world that is becoming increasingly interdependent" (National Council for the Social Studies [NCSS], 1979, p. 261). The social studies as a curriculum area provide the primary school or community focus for the preparation of our future citizens.

To accomplish this broad goal, Clegg (Ramsey and Bayless, 1980, p. 107) suggests the following components be considered in planning the social studies curriculum: (1) *knowledge* about human beings and the social and physical environment in which they live; (2) *abilities* and *skills* related to thinking, effective human relations and interpersonal communication skills; (3) *valuing*, including attitudes, beliefs and basic values of various cultures of the world; and (4) *social participation* which develops a willingness to actively participate in the social and political processes necessary in a democratic society.

According to Clegg, considerations for planning in social studies include knowledge, abilities and skills, valuing and social participation.

Jerome Bruner (1960) believes that given a state of readiness, a child can learn something about almost anything in an intellectually honest manner. So, properly simplified, certain major ideas associated with the social studies can be presented in an appropriate, interesting and appealing manner for young children.

Integrating social studies

The Peabody Center for Economic and Social Studies Education (1985) suggests that it is the context within which the kindergarten's social studies goals are achieved that distinguishes them from the general goals of other levels. Young children learn thoroughly what they experience, what is consistently modeled and what can frequently be practiced. The kindergarten years are important in that they provide the foundation for social learnings. An action-oriented context permits children to be involved in experiencing and generalizing social phenomena from which rules of social process and order are derived. A child's desire to build with blocks in an area where others ride their tricycles might require skillful negotiations, an

Young children learn through experience, modeling and practice.

assertion of physical dominance, coalition building or the ability to live with absolute denial. The teacher's ability to carefully match aspects of these situations with historical, geographical or environmental lessons (historical and contemporary), might help the child better understand concepts such as the common good, will of the majority, mechanics of power, responsibility of leadership, protection of the minority and the frustration of rejection. All of these are important learnings reinforced through an interactive learning context.

> Social knowledge is primarily derived from the interactions of an individual with the social environment; the social studies also are directly concerned with the human relationships resulting from these interactions.
>
> William B. Stanley, ed., 1985, p. 68

Development of a positive self-concept is a primary goal of the social studies for young children.

Concepts related to the social studies must have their beginnings with the child and should be based on the child's own self-concepts. Before children can accept, support and reach out to others, they must first accept, support and feel good about themselves. A primary goal of the social studies for young children, then, is the development of a positive self-concept. "Since a concept of self is a learned behavior, there ought to be specific teaching behaviors that foster a more positive self-concept in children" (Stanley, ed., 1985, p. 79). The social studies in early schooling should focus on spontaneous and more guided activities related to "the self" before content is extended to the broader concepts and skills of the social studies curriculum. An overview of a social studies curriculum plan appropriate for kindergarten children and related to "the self" follows.

Kindergarten: Myself

A. The nature of the individual and environment
The study of self in the immediate environment (birthdays, body parts, appearance, traits, preferences...)

- ☐ develop an understanding of self as a physical, social and psychological being (capabilities, unique characteristics, basic emotions)
- ☐ develop understanding and appreciation of various environments (family, home, school, community)
- ☐ develop an understanding that individual needs can be met in a variety of ways (basic needs, resources available, personal preference)

B. The individual as a member of the group
The study of relationships (family, classmates, school staff...)

- ☐ develop an understanding of groups and the roles people play in them (jobs, interests, responsibilities)
- ☐ learn to function in groups as leader and follower (democratic process, group dynamics, behavior)
- ☐ develop a sense of responsible group participation (respect for self and others, commitment to group welfare, rules)

C. Group adaptation to the environment
The study of adaptation as seen in natural and constructed areas around the school (structures, topography, equipment, paved and unpaved areas...)

- ☐ develop an understanding of the physical, social and psychological nature of adaptation (living and nonliving things, reflexes, unplanned events)
- ☐ develop an appreciation of the various ways in which people adapt (seasonal changes, mobility, interdependence)
- ☐ develop an understanding that people must live within the balance of nature (natural cycles, preservation, beauty)

D. Alteration of the environment by the group
The study of land use in the neighborhood (growing things, building, moving...)

- ☐ develop an appreciation of human capacity to alter the environment physically, socially and psychologically (cultural heritage, social responses, creative expression)
- ☐ develop an understanding of ways in which the environment has been altered (advantages and disadvantages, constructed and natural)
- ☐ recognize the obligation to preserve the balance of nature while meeting the future needs of society (predict outcomes, examine alternatives)

Social-emotional development is also considered in Chapter 4 of Part I of this program guide.

As children grow in self-esteem and become aware of and interested in significant people in their lives, they want to learn more about the world around them. Classroom visitors, field trips and other real experiences motivate children to become inquirers. "Children can also develop social perspective by modeling the behaviors transmitted to them by others" (Stanley, ed., 1985, p. 69).

Integral components of social studies

Young children need to actively participate in their learning.

Remembering that young children need to actively participate in their learning for true understanding to take place, teachers must seek approaches that will provide children with opportunities to investigate their social world. The areas normally included in the social studies are history, geography, citizenship, economics, sociology and anthropology. Teachers of young children must seek opportunities to integrate these considerations into the "fabric" of the experience-based kindergarten. Rigid assignments of time for the study of social studies at the kindergarten level seldom are helpful to children's understanding of these issues. Seizing opportunities to have children experience changes in living arrangements or negotiate differences, while the teacher adds support, can maximize the potential for the teaching of social studies. Teachers are encouraged to consider the whole classroom and its contents as vehicles through which appropriate social learnings can be taught.

Placing events in time

Young children enjoy hearing stories and touching things from other times.

Young children develop time concepts very slowly. **History** from the perspective of learning about events of long ago is much too abstract and carries little or no meaning for young children. Although they cannot really conceptualize "long ago," they do enjoy hearing stories and touching things from other times. Senior citizens might be invited to come into a classroom to tell stories or share insights into what their childhood times were like. Grandparents' Day can serve a real social studies purpose.

History also deals with the concept of change and the forces that cause it. Changes are evident in the child's environment and life. Seasons change, clothing changes, home and community sometimes change. We can focus attention on the results of these changes. Understanding one's own personal history is a good introductory approach to historical concepts. "There's a new baby in my family and I help my mother bathe him (her)." "I was a baby once, too." "My mommy showed me pictures of me when I was a baby."

The physical world and human relationships

Having a litter collection or going on a nature walk can be a part of geography.

Geography is concerned not only with the characteristics of the Earth's environment, but also with the relationship of that environment to the people who live in it. So not only physical features, but the dependence we have on the land — our food, farms, trees, etc. — and the conservation and care of our environment can be adapted to learnings for young children.

The kindergarten teacher might start with the school yard or neighborhood and help the children to recognize some of the physical features — hills, trees, brooks, roads and the like — and then help them to re-create these features in the sandbox or by making a simple map. Children can be helped to learn to care for their environment by having a litter collection activity or going on a nature walk to observe and appreciate the surroundings. Through these activities children integrate natural science concepts with the social studies.

The group and its members' responsibilities

Citizenship deals with the rights and responsibilities of individuals and with understanding the governing process. Prosocial behavior practices that foster helpful, cooperative interactions among children are basic to good citizenship.

Children have had many experiences with following rules set forth by parents, teachers, peers and others. It is important to them not only to learn to follow rules, but to have a voice in determining simple governance laws (rules) as they function in classroom and school settings.

A bibliography of law-related materials for kindergarten classes is included at the end of this chapter.

Allocating goods, efforts and services

The field of **economics** examines and describes the ways in which people produce, distribute, exchange and consume goods and services. The play store, the trading with a friend, the "No, we can't afford it" from a parent

when a new toy is requested are but a few of the economic encounters young children have experienced. But they may have lacked an understanding of why they couldn't have the new toy or why trading an expensive toy for a penny whistle was an unwise choice.

Some simple activities often can help the child begin to develop some economic concepts. Learning to work together to achieve a common goal is a better lesson about the division of labor than only verbally expressing the concept. "See how fast those blocks got picked up when we all pitched in to help!" An interesting activity is to collect all the lost articles in a classroom or school's lost and found box. Then, using a catalog or newspaper ads, price the items, add the results and tell children about the lost articles in terms of money. Children usually don't think about a lost article in terms of its value.

Living together and learning to share

Sociology involves the study of people's interpersonal relationships and the need of human beings to live together in groups. Young children are necessarily more egocentric. But as they enter play groups, day-care centers, other preschool programs and kindergartens, their horizons broaden and the need to be able to function in group situations becomes apparent. The kindergarten classroom serves as one of the early laboratories for children to experiment with and be guided in developing behaviors that are necessary for successful group membership.

Developing behaviors for group membership is guided through children's play.

One of the best types of experiences in this area is child's play. Maxim states, "Children's play can be characterized as a hierarchical, developmental process in which children gradually expand the quality and quantity of social interaction with other children" (Maxim, 1985, p. 436). An overly-directed approach leaves little or no room for the child to develop these interactional skills. "Play and social interaction provide a natural setting for the development of social thought and moral action, behaviors that are central to social studies education" (Pagano, 1978, p. 27).

The role of play is set forth in Chapter 5 of Part I of this guide.

Similarities and differences

Anthropology is the study of human beings, their cultures and the development of social institutions, religions, arts, languages, etc. As children become more interested in the significance of others in their lives, they begin to learn about the varying cultural practices observed in their environments. Art, music, celebrations and the like all add to enriching their lives. Children should not only come to value their own backgrounds, but also come to appreciate and value customs, beliefs and behaviors of others. Classroom populations bring a variety of cultural backgrounds and skills to the group and these are a good starting point for becoming aware of diversity. Parents often can contribute and serve as resources in this respect. The multiethnic understandings and appreciation of various traditions also can be fostered through celebrations of holidays such as Halloween and Thanksgiving; recognition of differing religious observances such as Hanukkah, Christmas and Three Kings' Day; and patriotic days such as Columbus Day, Martin Luther King Day and the like. Through songs, food preparation, stories and other kindergarten activities, children can be made more aware of cultural diversity and its contribution to their lives. No longer should children see America simply as a "melting pot." Our multicultural heritage should be recognized as part of the great richness America possesses. Kindergarten is a good time to begin! "The role of the teacher in the social education

Cultural diversity should be recognized as part of the great richness America possesses.

of young children involves two major concerns — content and methodology. The teacher's expertise in social education should be based on a firm grounding in the content of the social science disciplines, as well as on a knowledge of how the child learns" (Pagano, 1978, p. 82).

A review of the literature

The following review of literature regarding readiness of kindergarten children for social studies is a compilation of excerpts from *Social Studies for Early Childhood/Elementary School Children: Preparing for the 21st Century*, a draft of a position paper by the National Council for the Social Studies Task Force on Early Childhood/Elementary Social Studies. The list is not intended to be comprehensive; it is provided to point out the developmental competencies of kindergarten children relative to the teaching and learning of social studies.

> **Civic understanding.** Research indicates that children are ready to deal with, and already have ideas about much of what falls in the category of civic understanding:
>
> - As early as kindergarten, students are engaged in citizenship education, both covert and overt (Edwards, 1986).
>
> - Political feelings, evaluations, and attachments form well before the child learns the relevant supporting information (Greenstein, 1969, p. 72).
>
> - A developed sense of justice and law appear to be requisite to democratic citizenship (Kohlberg, 1976, p. 213). Particular types of classroom environments, including discussions in which students must actively think and communicate about another's reasoning, appear to facilitate this type of growth (Berkowitz, 1981; Berkowitz and Gibbs, 1983).
>
> **Social perspective.** ...Social judgments...involve more than the child "getting along" in the home or school environment. They involve the child's ability to make decisions about such issues as race and ethnicity, citizen concerns of law and justice, social welfare and economics, many of which make competing claims in a rapidly changing world.
>
> - Positive self-concepts, important in perceiving and judging social interactions, also form during these crucial early years (Stanley, 1985). Particular classroom environments seem to have an impact in this area....
>
> - Interest in and analysis of racial and ethnic differences begin early. Between the ages of 6 and 9, children begin to identify their own racial group as "better than the out-group" (Semaj, 1980, p. 76).

- Acquisition of concepts about racial and ethnic groups is complex, but there is evidence that early, planned and structured activities can result in more positive attitudes in children (Katz, 1976, p. 234).

Time and space. [Historical] time and space are abstract concepts formulated on relationships that are equally abstract, and certainly provide difficulties for young children. [Because of these difficulties,] some reluctance to introduce historical and geographical content in the elementary curriculum [has been voiced]. Recent research indicates that this reluctance may be unfounded. [Among the findings are:]

- Young children who are active participants in a highly structured and sequential series of geographic inquiries can learn complex analytic processes and concepts of geography (Crabtree, 1974; Muessig, 1987).

- Evidence indicates that children possess complex spatial information and can abstract information from map symbols (Hewes, 1982; Hatcher, 1983; Park and James, 1983; Liben, Moore and Golbeck, 1982).

- Children can learn cardinal directions as early as kindergarten (Lanegran, Snowfield and Laurent, 1970).

Economic understanding. Armento indicates that "part of the role of social studies during elementary school years is to use children's informal learning as a basis for formal development of critical thinking skills and for the construction of useful and powerful economic knowledge" (1986).

- By age 7, children have formulated fairly accurate conceptions of work, wants, and scarcity and evidence the capability of developing a method for making decisions (Armento, 1986)....

- Pictures and other concretizing tools can greatly benefit children with learning disabilities and those who have not enjoyed a broad variety of experience.

From *Social Studies for Early Childhood/Elementary School Children: Preparing for the 21st Century*. Draft of a position paper by the National Council for the Social Studies Task Force on Early Childhood/Elementary Social Studies, January 1988. Used by permission of the National Council for the Social Studies.

Implications for social studies teaching

John Dewey stressed in his philosophy the importance of learning through direct experience that the classroom should be a microdemocratic society.

"Montessori, Piaget, and a host of others agree that the young child learns through interaction with persons and things in a responsive learning environment" (Walsh, 1980, p. vii). This active approach serves not only children's cognitive needs, but also supports their psychomotor requirements.

Erik Erikson sees children at this developmental time as being in a period of "initiative vs. guilt". Thus, too restrictive an environment is likely to promote guilt. However, an environment where a child has room to self-initiate will encourage purpose and goal directedness. This time may also encompass the period of "industry vs. inferiority" in that the child is characterized by a desire to manipulate objects and learn how things work. Such an attitude, when reinforced, can lead to a sense of order, a system of rules and an important understanding of the nature of one's surroundings.

The social studies program enables children to participate effectively *now*, in the groups to which they belong, and not to look only to their future participation as adults. For the developmental and interactive-oriented kindergarten, social studies is more than a content-focused area of study. It also requires a teacher's integration of social learnings into the day and creating a setting in which social concepts can be learned through direct experiences and involvement. "If children are viewed as interactive, they can be expected to give input into the environment and to be influenced by the environment. The interaction is a two-way relationship" (Pagano, 1978, p. 86). Field trips, resource people and classroom activities can give the child opportunities to practice and develop prosocial skills and to learn concepts and understandings necessary for life in his or her increasingly interdependent world.

'...knowledge is seldom gained by children sitting in class listening to lectures.'

"Teachers must realize that knowledge is seldom gained by children sitting in class listening to lectures. Knowledge is constructed from within and is facilitated by a teacher who combines verbal labels with experiential activities" (Stanley, ed., 1985, p. 103).

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